

MEMORANDUM REPORT ARBRL-MR-02880

TURBULENT BOUNDARY LAYER MEASUREMENTS ON  
THE BOATTAIL SECTION OF A YAWED, SPINNING  
PROJECTILE SHAPE AT MACH 3.0

Lyle D. Kayser  
Walter B. Sturek

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## I. INTRODUCTION

The BRL has been conducting and supporting theoretical and experimental Magnus research efforts in recent years. As a result of this research, numerical techniques have been developed for computing Magnus effects (forces and moments). Details of the computational procedure are described in references 1, 2, 3, and 4. The purpose of the experimental investigation reported here is to acquire detailed three-dimensional turbulent boundary layer profile data for the flow over a projectile boattail. These data are being used for comparison with the numerical computations in order to provide guidance and to help evaluate the theoretical effort.

A substantial number of experiments have been conducted in support of the BRL Magnus program. Types of experiments that have been conducted include: strain-gauge force and moment measurements, surface pressure measurements, and boundary layer studies. Results from some

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1. H. A. Dwyer, "Three Dimensional Flow Studies Over a Spinning Cone at Angle of Attack," BRL Contract Report No. 137, February 1974, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland. AD 774795.
  2. H. A. Dwyer and B. R. Sanders, "Magnus Forces on Spinning Supersonic Cones. Part I: The Boundary Layer," BRL Contract Report No. 248, July 1975, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland. AD A013518. Also, *AIAA Journal*, Vol. 14, No. 4, April 1976, p. 498.
  3. B. R. Sanders, "Three-Dimensional, Steady, Inviscid Flow Field Calculations With Application to the Magnus Problem," PhD Dissertation, University of California, Davis, California, May 1974.
  4. W. B. Sturek, et al, "Computations of Turbulent Boundary Layer Development Over a Yawed, Spinning Body of Revolution With Application to Magnus Effect," BRL Report No. 1985, May 1977, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland. AD A041338.

of these experiments can be found in references 5 through 9. The primary purpose of this report is to provide a tabulation of the boundary layer profile data and integral parameters. A description of the experiment and a limited analysis of the data are also provided.

## II. EXPERIMENT

All boundary layer results presented in this report were obtained on the boattail of the secant-ogive-cylinder-boattail model (SOCBT) shown in Figure 1. The model is 57.15 mm (2.25 inches) in diameter and 342.9 mm (13.5 inches) long. A boundary layer trip was placed on the ogive to insure the location of the start of turbulent flow. The tests were conducted in the BRL Supersonic Wind Tunnel No. 1, which is a continuous flow tunnel with a test section of 330 x 381 mm (13 x 15 inches). Measurements of the total head pressure through the boundary layer were made with a flattened impact pressure probe 1.5 mm wide by 0.15 mm high. The probe was electrically isolated from the probe holder so that contact with the model, for non-spinning runs, could be determined with an ohmmeter. The probe drive mechanism moved the probe perpendicular to the model centerline; also, the probe drive mechanism could be positioned circumferentially about the model. The SOC model without the boattail, the probe, and the probe drive mechanism are shown installed in the tunnel in Figure 2.

5. Charles J. Nietubicz, Klaus O. Opalka, and Walter B. Sturek, "Magnus Force Measurements on Bodies of Revolution at Supersonic Speeds," to be published as a BRL Memorandum Report.
6. R. P. Reklis and W. B. Sturek, "Surface Pressure Measurements on Slender Bodies at Angle of Attack in Supersonic Flow," to be published as a BRL Memorandum Report.
7. L. D. Kayser and W. B. Sturek, "Experimental Measurements in the Turbulent Boundary Layer of a Yawed, Spinning Ogive-Cylinder Body of Revolution at Mach 3.0. Part I. Description of the Experiment and Data Analysis," ARBRL-MR-02808, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland, January 1978. AD A052301.
8. L. D. Kayser and W. B. Sturek, "Experimental Measurements in the Turbulent Boundary Layer of a Yawed, Spinning Ogive-Cylinder Body of Revolution at Mach 3.0. Part II. Data Tabulation," ARBRL-MR-02813, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland, March 1978. AD A053458.
9. L. D. Kayser, W. B. Sturek, and W. J. Yanta, "Measurements in the Turbulent Boundary Layer of a Yawed, Spinning Body of Revolution at Mach 3.0 With a Laser Velocimeter and Impact Probe," AIAA 10th Aerodynamic Testing Conference, San Diego, California, 19-21 April 1978.



The boundary layer survey procedure was to bring the impact probe from outside the boundary layer down to, and touching, the model for the no-spin case; immediately following a no-spin run, the model was brought up to the 333 rps (20,000 rpm) spin rate and the probe was brought down through the boundary layer to within approximately 0.1 mm of the surface. Data were obtained at 5.33 and 5.67 calibers from the nose (i.e., 0.67 and 0.33 caliber from the base) and the angle-of-attack range was 0 to 6.3 degrees. Data were acquired circumferentially around the model in 30 degree increments and also at 10 degrees on each side of the leeward ray ( $\phi = 180$  degrees). At most positions, surveys were made at both 0 and 333 rps: the spin rate of 333 rps corresponds to a dimensionless spin rate (pd/V) of 0.19 at Mach 3.0. Tunnel conditions for the tests were: Mach 3.0; a supply temperature of 310 K; a supply pressure of 298 kPa. These conditions provided a Reynolds number of  $7.3 \times 10^6$  based on model length. Local Mach numbers within the boundary layer were determined from the Rayleigh pitot formula assuming a constant static pressure across the boundary layer. The data in this report were reduced using the experimental values of wall static pressure obtained by Reklis<sup>6</sup>. Figure 3 is a comparison of experimental pressures and theoretical surface pressures computed with the inviscid program described in reference 3. The model surface temperature was assumed to be equal to the adiabatic wall temperature for turbulent flow--the recovery factor was taken as the cube root of the Prandtl number. The temperature distribution in the boundary layer was found by assuming the Crocco linear total temperature profile:

$$\frac{T_t - T_w}{T_o - T_w} = \frac{u}{u_e} .$$

With temperature, pressure, and Mach number determined, local densities and velocities can be calculated. The integral parameters of displacement thickness, momentum thickness, and velocity thickness were determined by integrating from  $y = 0$  to  $y = \delta$  where  $\delta = y$  at  $u = 0.985 u_e$ .

The value of 0.985 provided a more consistent circumferential distribution of boundary layer thicknesses than the conventional value of 0.99 because of slight velocity gradients outside of the boundary layer.

The probe axis was aligned longitudinally with the model axis. Some uncertainty is inherent in the profile data due to the probe not being aligned with the local flow direction within the boundary layer. The uncertainty due to cross flow would be of the order of angle of attack at the outer edge of the boundary layer when probing the sides of the model ( $\phi = 90$  and  $270$  degrees). The uncertainty due to spin is expected to be small because the large velocity gradients in a turbulent boundary layer would confine the greatest effect of flow angularity to a very small region near the surface which cannot be probed accurately using a total head probe.



Impact pressure measurements were made in the tunnel freestream at angles of incidence from -10 to +15 degrees in both pitch and yaw--these results are shown in Figure 4. In pitch, the probe pressure does not vary more than  $\pm \frac{1}{2}$  percent from approximately -8 to +15 degrees. The pressure variation with yaw is nearly a cosine function and it is within the  $\frac{1}{2}$  percent deviation from approximately -6 to +6 degrees. This relative insensitivity to angle of incidence suggests that it would not have been worth any substantial effort to align the probe axis with the local flow direction.

Data Accuracy -- The pressure transducers used are linear to within 0.25% of full scale value. The data acquisition system measurement accuracy is approximately 0.1% of full scale. Full scale is rarely achieved on the transducer or the system measurement range; therefore, the accuracy of measured pressures is estimated to be  $\pm 1.0\%$ . The positioning of the probe in the y direction was repeatable to within approximately 0.03 mm and the uncertainty in determining the point of probe-model contact was also approximately 0.03 mm. The uncertainty of the probe position relative to the model surface is, therefore, estimated to be within 0.06 mm (0.0025 inch).

The possibility of interference between the model and the probe is also of concern. In recent tests at the Naval Surface Weapons Center<sup>9</sup>, velocities were measured in the boundary layer with laser velocimeter for both spinning and non-spinning conditions. Comparisons of velocity profiles obtained from LDV measurements and from impact pressure measurements show good correlation. These comparisons provide evidence that probe-model interference was not significant for the sizes of boundary layers that were encountered.

### III. DISCUSSION OF RESULTS

A test run summary for the boundary layer experiments is given in Table I and a tabulation of all data can be found in Appendix A.

To help clarify the data, the orientation of the probe with respect to the model must be known. The boundary layer and model coordinate system is shown in Figure 5. Circumferential points of  $\phi = 0$  degrees, at  $y = 0$ , lie on the most windward ray of the model when the model is at some angle of attack. Looking upstream at the model base, with the model at positive angle of attack,  $\phi = 0$  is on the bottom (6 o'clock);  $\phi = 90$  degrees is to the left (9 o'clock);  $\phi = 180$  degrees is on the top (12 o'clock); and  $\phi = 270$  degrees is to the right (3 o'clock). A clockwise spin is positive; therefore, a positive spin gives a surface velocity in the same direction as cross flow on the left side of the model. On the right side, cross flow and model surface velocities are in the opposite direction.

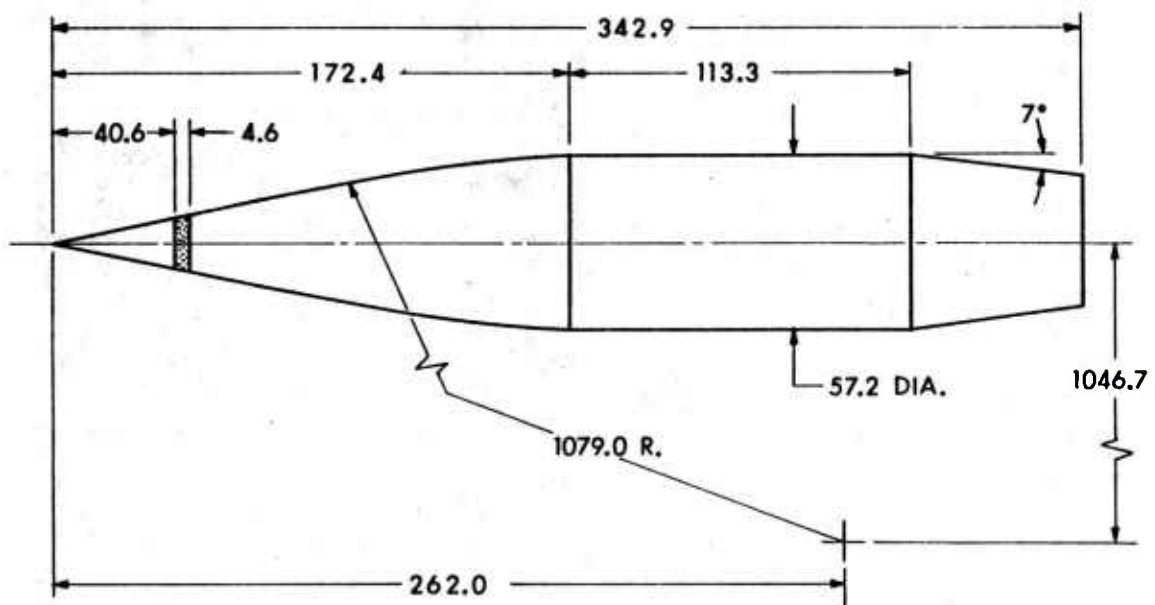
A comparison of experimental and theoretical velocity profiles at two degrees angle of attack is shown in Figure 6. The agreement on the windward side is very good but slight differences do exist in the profile shape on the leeward side near  $\phi = 150, 180$  degrees. Experimental velocities are slightly lower near the wall and slightly higher in the outer portion of the boundary layer. Figure 7 compares velocity profiles on opposite sides of the model and illustrates that the effects of spin on profile shape are measurable. On the windward side of the model, at  $\phi = 30$  vs  $330$  and  $60$  vs  $300$ , there are no discernible effects of spin. On the leeward side, near  $\phi = 120$  vs  $240$  and  $150$  vs  $210$ , effects of spin on the profile shape are substantial. However, near the leeward ray ( $\phi = 170, 180, 190$ ), the effects of spin were generally found to be small.

Figure 8 shows the longitudinal variation of displacement thickness at two degrees angle of attack. Boundary layer data on the cylindrical section were reported in references 7 and 8. The comparison of theory and experiment is encouraging; however, the disagreement is sufficient to suggest that conventional eddy viscosity models are not sufficiently responsive to changes in wall boundary conditions caused by abrupt changes in surface curvature such as occurs at the cylinder-boattail junction. The circumferential variation of displacement thickness for several angles of attack, with and without model spin, are shown in Figure 9. This figure illustrates clearly where the effects of spin are most pronounced. The dips at  $\phi = 180$  degrees for angles of attack of 4.2, 5.3, and 6.3 degrees are believed to be caused by longitudinal vortices that are forming within the boundary layer. At the higher angles of attack of 5.3 and 6.3 degrees, the dramatic thickening of the boundary layer suggests that leeward separation of the boundary layer may be near. The existence of such longitudinal separation type vortices suggests that boundary layer theory will not be adequate at angles of attack greater than five degrees. However, these data should be of value for comparison with boundary region or Navier-Stokes numerical computations. Additional displacement thickness data are shown in Figure 10. The increment of displacement thickness due to spin, at  $\alpha = 4$  degrees, is shown on an expanded scale as a function of circumferential position. Theoretical calculations for the increment of displacement thickness, on the cylindrical section, compared to experiment (reference 4) showed good agreement and the variation was qualitatively the same as shown in Figure 10.

#### IV. CONCLUDING REMARKS

A substantial quantity of three-dimensional turbulent boundary layer profile data, including effects of spin, have been acquired on a realistic projectile boattail configuration. The data will be of value for comparison with theoretical computations of three-dimensional turbulent boundary layer development. Preliminary comparisons of theoretical computations to these data using BRL's numerical finite-

difference codes indicate discrepancies which suggest that more sophisticated turbulence models may be required to adequately predict the boundary layer development over shapes with abrupt changes in wall geometry. The higher angle-of-attack data will be useful in defining the limits of boundary layer theory and for comparison with more general type calculations such as obtained from boundary-region or Navier-Stokes type codes.



NOTE: DIMENSIONS ARE IN MILLIMETRES

Figure 1. Model Geometry

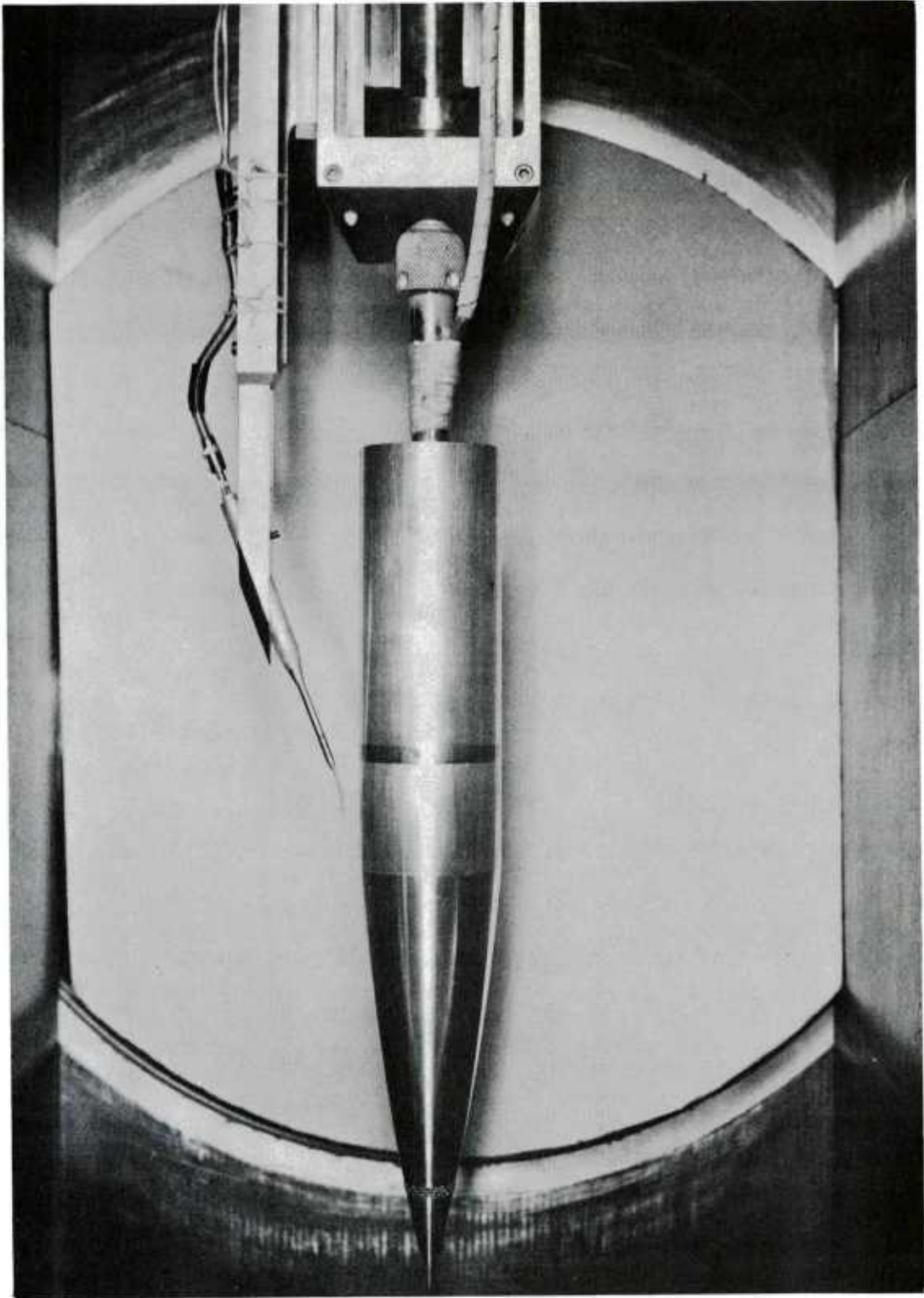


Figure 2. Model Installation Photograph

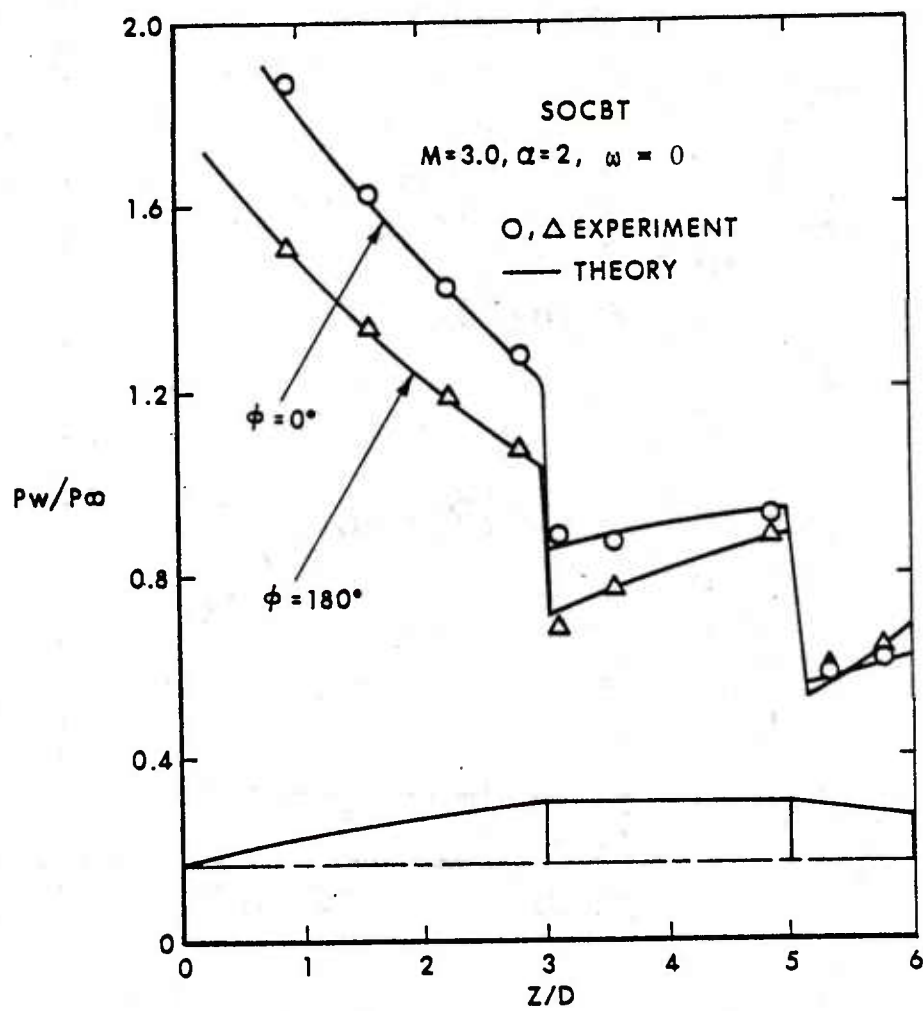


Figure 3. Surface Pressure Distribution



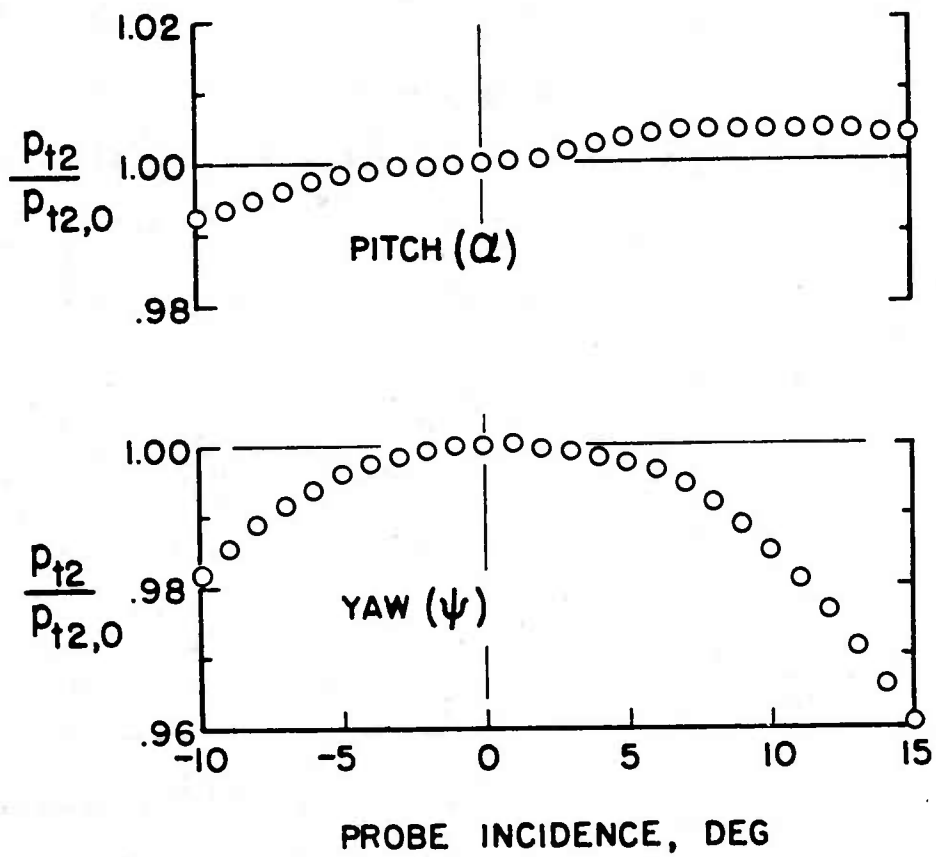


Figure 4. Impact Probe Calibration

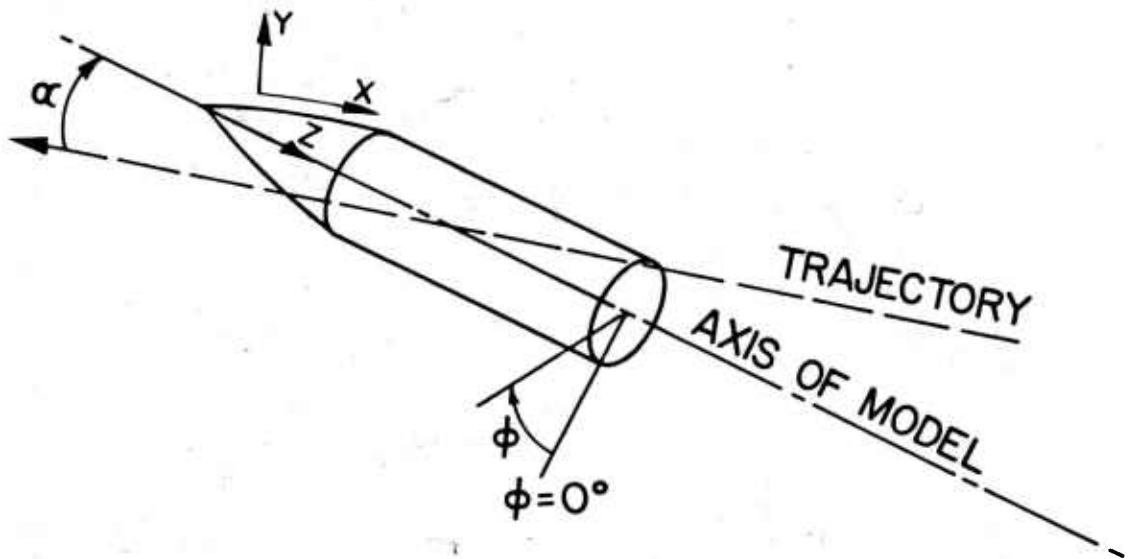


Figure 5. Coordinate System

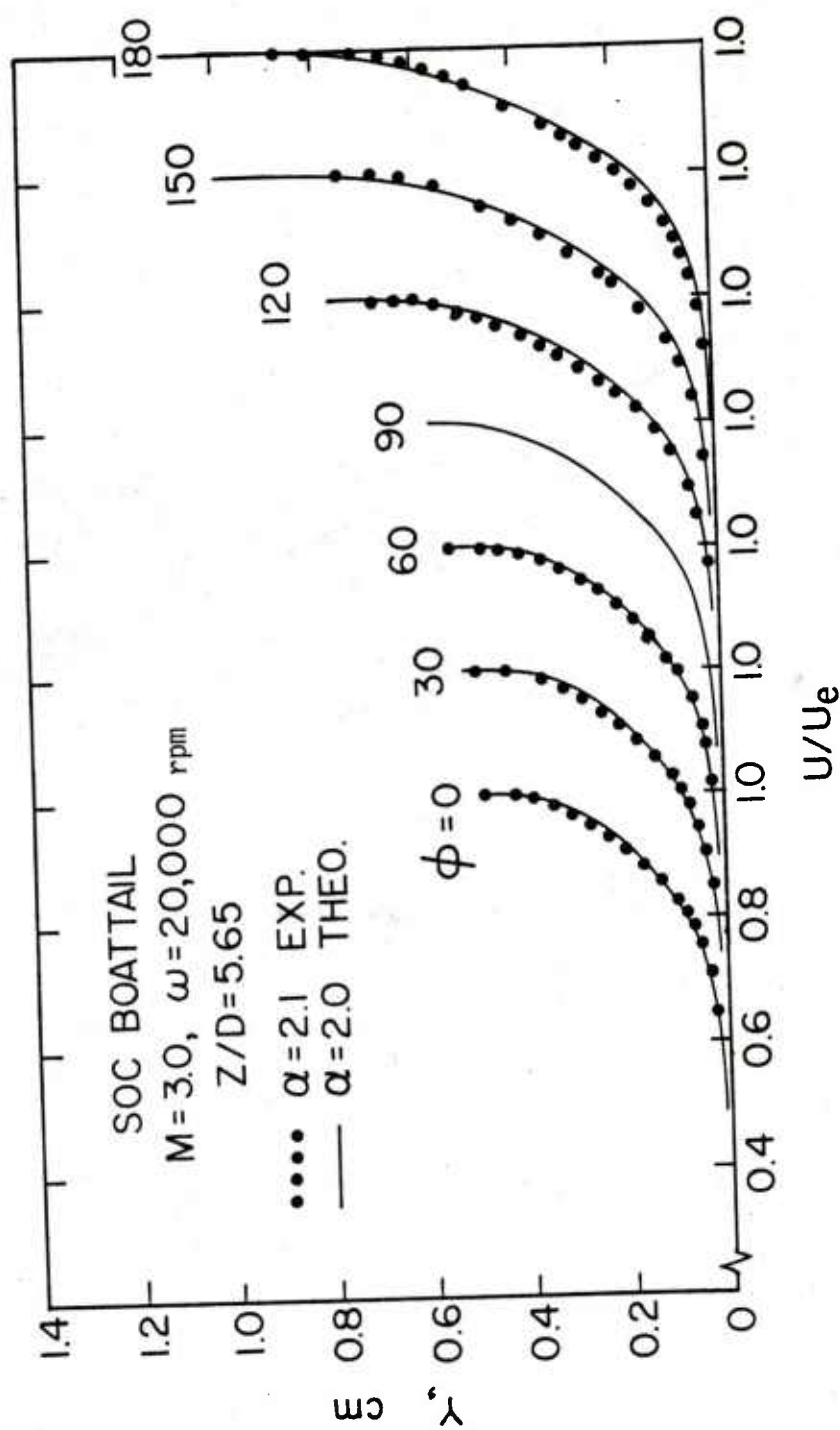


Figure 6. Velocity Profiles, Theory and Experiment

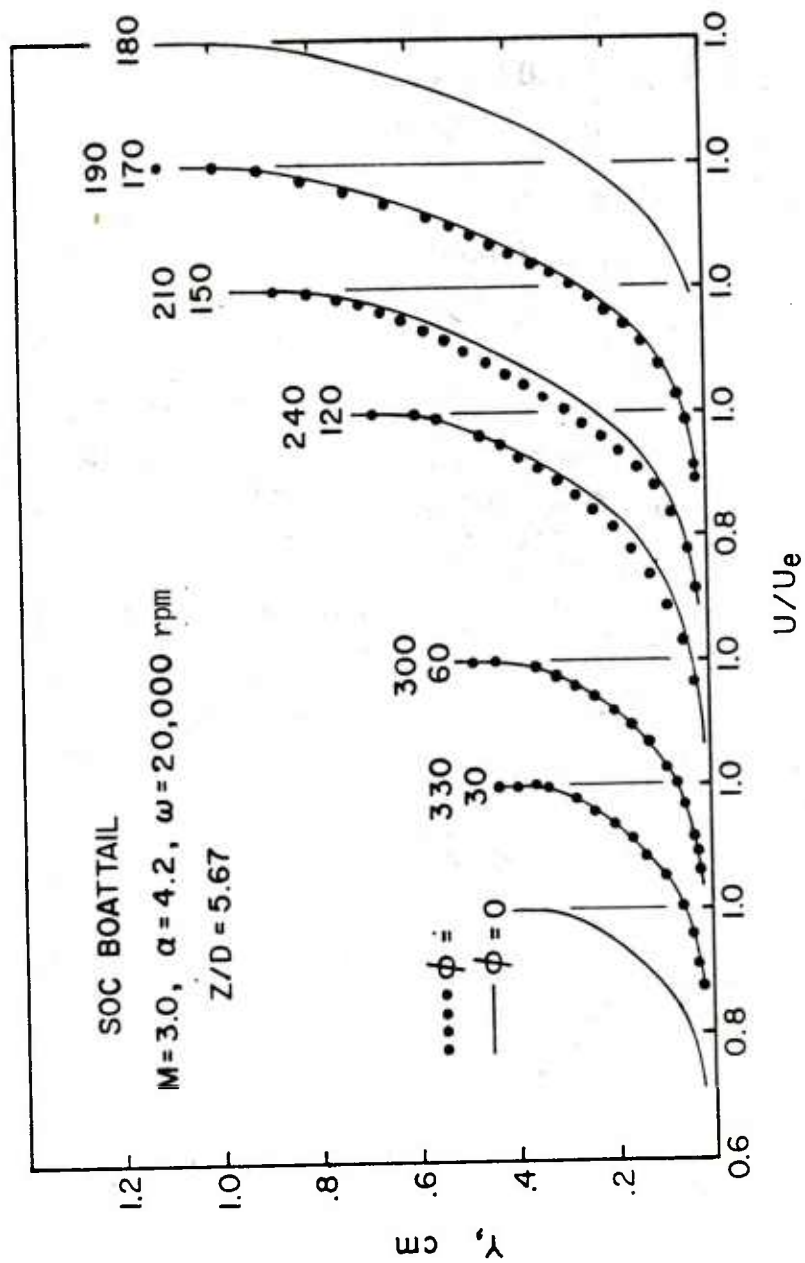


Figure 7. Velocity Profiles, Experiment

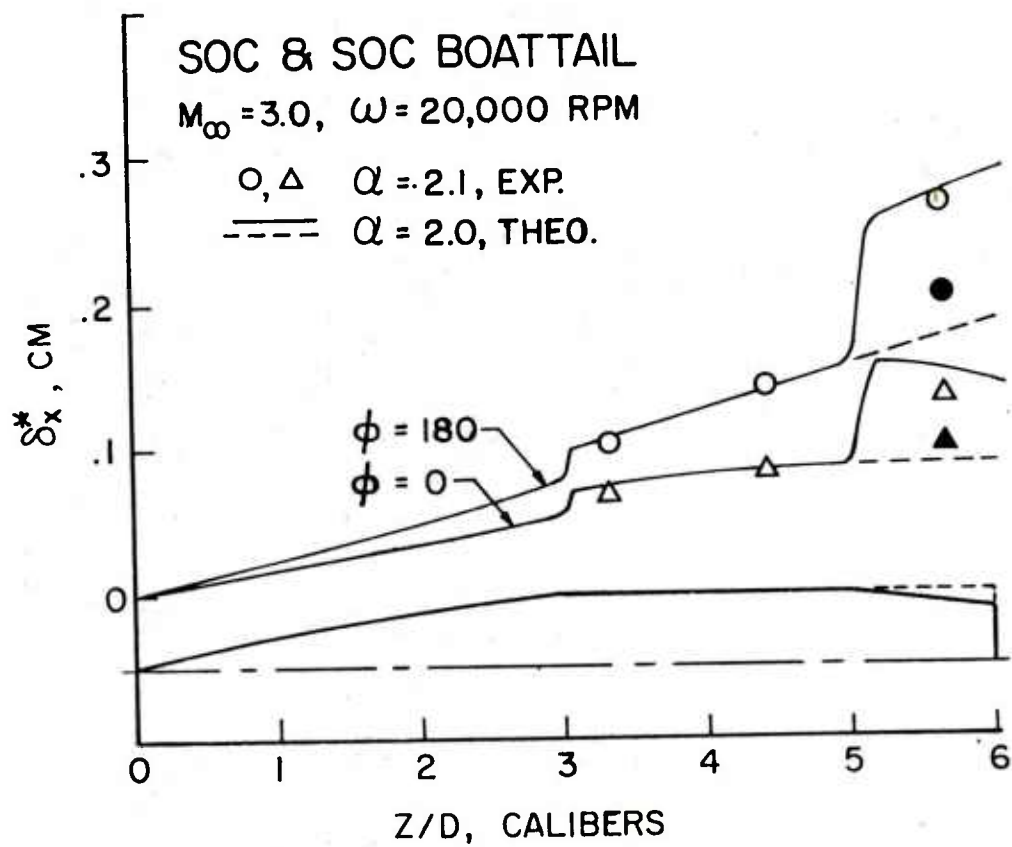


Figure 8. Longitudinal Variation of Displacement Thickness

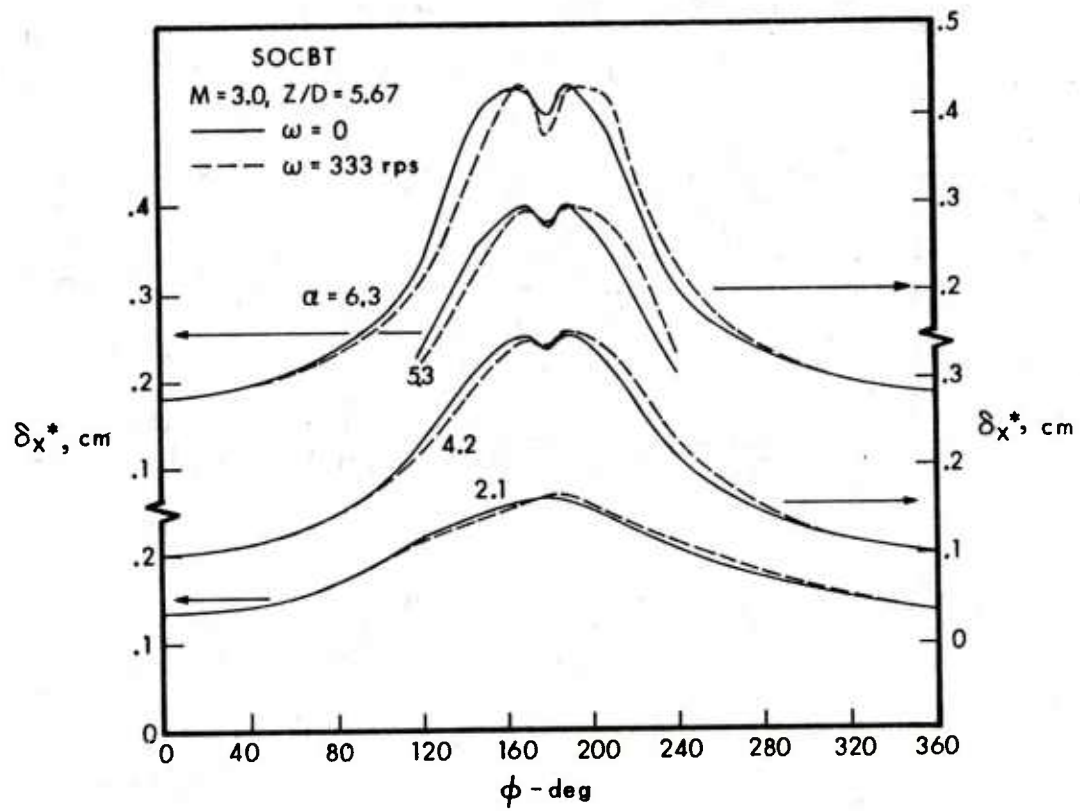


Figure 9. Angle-of-Attack Effect on Displacement Thickness, Experimental Data



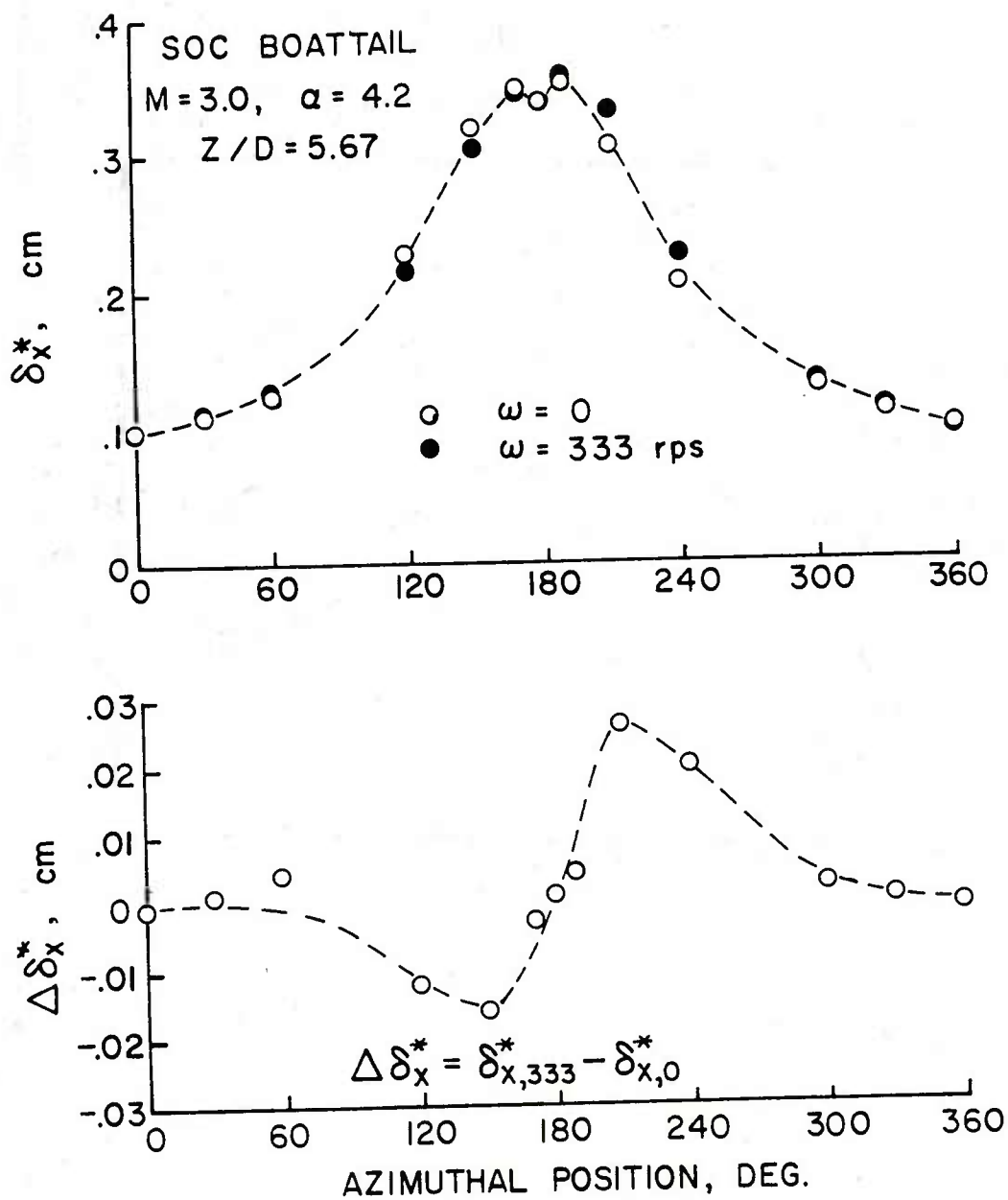


Figure 10. Effect of Spin on Displacement Thickness

Table I. Test Run Summary, SOCBT

$\phi$	$\alpha = 0$	$\alpha = 2.1$	$\alpha = 0$	$\alpha = 2.1$	$\alpha = 4.2$	$\alpha = 5.3$	$\alpha = 6.3$
	Z/D = 5.33						
0	0	0,333*	0	0,333	0,333		0,333
30	0	0,333		0,333	0,333		0,333
60	0	0,333	0	0,333	0,333		0,333
90							
120		0,333		0,333	0,333	333	0,333
150		0,333		0,333	0,333	0,333	0,333
170	0,333	0,333		0,333	0,333	0,333	0,333
180		0,333		0,333	0,333	0,333	0,333
190		0,333		0,333	0,333	0,333	0,333
210		0,333		0,333	0,333	0,333	0,333
240		0,333		0,333	0,333	0,333	0,333
270		0,333					
300		0,333		0,333	0,333		0
330		0,333		0,333	0,333		0,333

\* Model spin rate, rps

## REFERENCES

1. H. A. Dwyer, "Three Dimensional Flow Studies Over a Spinning Cone at Angle of Attack," BRL Contract Report No. 137, February 1974, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland. AD 774795.
2. H. A. Dwyer and B. R. Sanders, "Magnus Forces on Spinning Supersonic Cones. Part I: The Boundary Layer," BRL Contract Report No. 248, July 1975, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland. AD A013518. Also, *AIAA Journal*, Vol. 14, No. 4, April 1976, p. 498.
3. B. R. Sanders, "Three-Dimensional, Steady, Inviscid Flow Field Calculations With Application to the Magnus Problem," PhD Dissertation, University of California, Davis, California, May 1974.
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# LIST OF SYMBOLS

$D$	diameter of model base
$p$	model spin rate, radians/second
$p_{t_2}$	impact probe pressure
$p_{t_{2,0}}$	impact probe pressure at zero yaw
$p_w$	model wall static pressure
$p_\infty$	free-stream static pressure
SOCBT	secant-ogive-cylinder-boattail
$T_o$	tunnel total temperature
$T_t$	local total temperature
$T_w$	model wall temperature
$u,w,v$	velocities in boundary layer coordinates
$u_e$	velocity at edge of boundary layer
$V$	velocity along model trajectory
$x,\phi,y$	boundary layer coordinates
$z$	longitudinal model axis coordinate
$\alpha$	angle of attack, degrees
$\delta$	boundary layer thickness, $\delta = y$ at $u = 0.985 u_e$
$\delta_x^*$	longitudinal component of displacement thickness, cm
$\Delta\delta_x^*$	increment of displacement thickness due to spin, cm
$\phi$	circumferential boundary layer coordinate, degrees

## APPENDIX A

The order of tabulated boundary layer profile data is as follows.

<u>Z/D</u>	<u><math>\alpha</math></u>	<u>Page</u>
5.33	0 -----	29
	2.1 -----	31
5.67	0 -----	43
	2.1 -----	44
	4.2 -----	56
	5.3 -----	68
	6.3 -----	75

Within each angle-of-attack group, data are in order of increasing roll angle ( $\phi$ ) with spin and no-spin runs together.

At  $Z/D = 5.33$ , data for angles of attack greater than 2.1 degrees were not processed because the outer portion of the boundary layer was in the Prandtl-Meyer expansion fan and the edge of the boundary layer could not be accurately located.

### Computer Tabulation Nomenclature

Mach	tunnel free-stream Mach number
PO	tunnel supply pressure, kPa
TO	tunnel supply temperature, deg. K
ALPHA	angle of attack, deg.
Z/D	distance in calibers from nose
PHI	circumferential position, degrees
RPM	model spin rate, rpm
PW	model wall pressure at point of survey, kPa
REL	Reynolds number based on model length
Y	distance normal to model surface, cm
TT	local total temperature, deg. K
T	local static temperature, deg. K
M	local Mach number
U	local velocity, m/s
RHO	local density, m/s
DEL	boundary layer thickness, $DEL = Y$ at $U = 0.985 UE$
DELU	velocity thickness, cm
DEL*	displacement thickness, cm
THETA	momentum thickness, cm
H	boundary layer shape parameter, $\delta^*/\theta$
UE	velocity at edge of boundary layer, m/s
RHOE	density at edge of boundary layer, $kg/m^3$



MACH = 3.00	P0 = 297.6 KPA	T0 = 313.2 K		
ALPHA= .00	Z/D= 5.33	PHI= -60.		
RPM= 0.	PW = 4.60 KPA	REL=7078049.		

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.327
.017	.953	.818	.908	.439	.366
.031	.961	.766	1.127	.527	.391
.044	.967	.714	1.331	.601	.420
.063	.973	.661	1.537	.668	.454
.077	.975	.636	1.634	.696	.472
.099	.978	.601	1.771	.734	.499
.127	.981	.572	1.892	.764	.525
.173	.983	.543	2.011	.792	.552
.218	.984	.527	2.084	.808	.569
.255	.985	.516	2.130	.818	.581
.305	.986	.502	2.194	.831	.597
.352	.987	.487	2.268	.846	.616
.398	.989	.468	2.358	.862	.641
.446	.990	.446	2.468	.881	.672
.483	.991	.433	2.541	.893	.693
.537	.992	.418	2.623	.906	.718
.584	.993	.405	2.694	.916	.740
.632	.994	.394	2.759	.926	.761
.681	.995	.384	2.822	.934	.782
.726	.995	.374	2.882	.942	.802
.798	.996	.360	2.975	.953	.834
.874	.997	.342	3.093	.967	.876
.944	.998	.328	3.194	.978	.913
1.020	.999	.316	3.284	.987	.948
1.090	.999	.308	3.352	.994	.974
1.170	1.000	.303	3.391	.998	.990
1.247	1.000	.301	3.410	.999	.997

DEL = .4371	DELU= .0607	DEL*= .1696 CM
THETA= .02723	H = 6.226	UE = 663.8 M/SEC
RHOE= .1709	KG/M**3	RUN = 265

MACH = 3.00	P0 = 298.2 KPA	T0 = 312.4 K		
ALPHA= .00	Z/D= 5.33	PHI= 0.		
RPM= 0.	PW = 4.61 KPA	REL=7135698.		

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.330
.017	.955	.811	.940	.454	.373
.033	.963	.751	1.186	.551	.402
.051	.970	.696	1.403	.627	.435
.062	.973	.663	1.530	.668	.456
.079	.976	.632	1.648	.702	.478
.103	.979	.599	1.781	.739	.505
.126	.981	.575	1.878	.763	.526
.146	.982	.559	1.945	.779	.541
.185	.984	.540	2.029	.799	.561
.229	.985	.528	2.078	.809	.572
.277	.986	.516	2.136	.822	.587
.313	.987	.505	2.184	.832	.599
.362	.988	.486	2.273	.849	.623
.408	.990	.469	2.357	.865	.646
.452	.991	.453	2.437	.879	.668
.500	.992	.439	2.510	.891	.690
.545	.993	.426	2.579	.902	.711
.593	.994	.414	2.645	.912	.731
.629	.994	.404	2.702	.920	.749
.672	.995	.394	2.761	.929	.768
.726	.996	.382	2.834	.939	.792
.772	.997	.372	2.898	.947	.814
.823	.997	.361	2.971	.956	.839
.872	.998	.350	3.041	.964	.864
.916	.999	.340	3.112	.972	.890
.970	.999	.329	3.192	.981	.920
1.018	1.000	.320	3.256	.987	.945
1.062	1.000	.314	3.307	.992	.965
1.114	1.001	.309	3.342	.996	.979
1.157	1.001	.307	3.360	.998	.986
1.211	1.001	.305	3.378	.999	.993
1.261	1.001	.304	3.386	1.000	.996

DEL = .4409	DELU= .0620	DEL*= .1737 CM
THETA= .02803	H = 6.197	UE = 661.0 M/SEC
RHOE= .1715	KG/M**3	RUN = 204

MACH = 3.00	P0 = 298.3 KPA	T0 = 310.9 K		
ALPHA= .00	Z/D= 5.33	PHI= 30.		
RPM= 0.	PW = 4.61 KPA	REL=7155445.		

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.017	.953	.822	.894	.429	.366
.026	.958	.791	1.030	.491	.384
.038	.966	.733	1.258	.577	.414
.063	.973	.674	1.489	.654	.451
.080	.976	.634	1.643	.701	.479
.102	.979	.602	1.770	.735	.505
.150	.983	.560	1.943	.778	.543
.189	.984	.538	2.034	.799	.564
.233	.986	.522	2.106	.815	.582
.273	.986	.507	2.172	.829	.598
.317	.987	.493	2.240	.842	.616
.369	.988	.477	2.316	.857	.637
.409	.989	.463	2.383	.869	.655
.456	.991	.449	2.454	.881	.676
.502	.991	.436	2.521	.892	.696
.551	.992	.425	2.581	.902	.714
.591	.992	.418	2.622	.908	.727
.644	.993	.404	2.698	.919	.750
.691	.994	.394	2.757	.927	.770
.735	.995	.382	2.832	.938	.795
.784	.995	.369	2.913	.948	.822
.837	.996	.356	2.998	.958	.852
.882	.997	.345	3.070	.967	.878
.927	.997	.335	3.142	.975	.905
.980	.998	.325	3.215	.983	.933
1.030	.998	.318	3.273	.988	.955
1.080	.999	.312	3.320	.993	.973
1.130	.999	.308	3.348	.996	.985
1.180	.999	.306	3.368	.998	.993
1.225	.999	.304	3.380	.999	.997

DEL = .4390	DELU= .0619	DEL*= .1715 CM
THETA= .02804	H = 6.115	UE = 660.0 M/SEC
RHOE= .1711 KG/M**3		RUN = 221

MACH = 3.00	P0 = 298.4 KPA	T0 = 310.2 K		
ALPHA= .00	Z/D= 5.33	PHI= 60.		
RPM= 0.	PW = 4.61 KPA	REL=7189564.		

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.017	.953	.824	.884	.429	.366
.026	.958	.786	1.047	.497	.383
.038	.966	.718	1.316	.597	.420
.063	.973	.702	1.378	.618	.429
.080	.976	.660	1.542	.670	.457
.102	.979	.619	1.700	.716	.487
.150	.983	.592	1.808	.745	.509
.189	.984	.573	1.886	.764	.526
.233	.986	.547	1.999	.791	.552
.273	.986	.525	2.095	.812	.575
.317	.987	.507	2.173	.828	.594
.369	.988	.493	2.238	.841	.611
.409	.989	.478	2.309	.855	.630
.456	.991	.464	2.382	.868	.651
.502	.991	.451	2.444	.879	.668
.551	.992	.440	2.505	.889	.686
.591	.992	.428	2.567	.899	.705
.644	.993	.416	2.635	.909	.725
.691	.994	.402	2.713	.921	.750
.735	.995	.389	2.790	.931	.775
.784	.995	.377	2.867	.942	.801
.837	.996	.356	3.000	.958	.847
.882	.997	.340	3.109	.971	.886
.927	.997	.323	3.235	.984	.934
.980	.998	.312	3.318	.992	.966
1.030	.998	.306	3.367	.997	.985
1.080	.999	.303	3.390	.999	.994

DEL = .4311	DELU= .0611	DEL*= .1694 CM
THETA= .02719	H = 6.232	UE = 659.5 M/SEC
RHOE= .1727 KG/M**3		RUN = 250

MACH = 3.00	P0 = 297.4 KPA	T0 = 318.2 K	MACH = 3.00	P0 = 297.6 KPA	T0 = 318.3 K
ALPHA= 2.10	Z/D= 5.33	PHI= 0.	ALPHA= 2.10	Z/D= 5.33	PHI= 0.
RPM= 0.	PW = 4.63 KPA	REL=6908582.	RPM= 20000.	PW = 4.63 KPA	REL=6902548.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.332
.022	.959	.782	1.063	.634	.479
.038	.963	.751	1.189	.597	.509
.044	.967	.716	1.323	.566	.538
.064	.973	.657	1.549	.547	.556
.090	.978	.614	1.721	.513	.592
.123	.981	.571	1.894	.498	.610
.149	.983	.546	2.000	.482	.631
.198	.985	.517	2.129	.469	.649
.253	.987	.498	2.214	.451	.674
.307	.988	.480	2.302	.436	.697
.361	.989	.463	2.385	.421	.723
.414	.991	.447	2.467	.406	.750
.471	.992	.431	2.550	.391	.777
.521	.993	.420	2.612	.379	.802
.580	.994	.407	2.684	.366	.830
.644	.995	.392	2.772	.354	.858
.700	.996	.379	2.849	.342	.890
.758	.997	.367	2.926	.330	.921
.820	.997	.354	3.015	.323	.941
.878	.997	.343	3.086	.316	.962
.941	.998	.333	3.161	.312	.976
1.000	.998	.324	3.230	.308	.986
1.057	.999	.316	3.285	.305	.996
1.181	1.000	.308	3.349		
1.311	1.000	.306	3.370		

DEL = .3393	DELU= .0444	DEL*= .1250 CM
THETA= .02048	H = 6.104	UE = 666.9 M/SEC
RHOE= .1680	KG/M**3	RUN = 465

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.332
.069	.976	.634	1.640	.700	.479
.097	.979	.597	1.787	.740	.509
.123	.982	.566	1.917	.773	.538
.142	.983	.547	1.998	.792	.556
.204	.986	.513	2.145	.824	.592
.254	.987	.498	2.213	.838	.610
.309	.988	.482	2.292	.853	.631
.360	.989	.469	2.356	.865	.649
.420	.990	.451	2.443	.880	.674
.471	.991	.436	2.523	.893	.697
.532	.992	.421	2.606	.906	.723
.586	.993	.406	2.692	.919	.750
.647	.994	.391	2.774	.931	.777
.707	.995	.379	2.849	.941	.802
.762	.996	.366	2.931	.951	.830
.823	.997	.354	3.011	.961	.858
.882	.998	.342	3.098	.971	.890
.947	.998	.330	3.179	.979	.921
1.000	.999	.323	3.232	.985	.941
1.063	.999	.316	3.288	.991	.962
1.129	.999	.312	3.322	.994	.976
1.188	1.000	.308	3.347	.996	.986
1.318	1.000	.305	3.372	.999	.996

DEL = .3375	DELU= .0462	DEL*= .1254 CM
THETA= .01996	H = 6.284	UE = 667.1 M/SEC
RHOE= .1680	KG/M**3	RUN = 466

MACH = 3.00	P0 = 297.9 KPA	T0 = 309.9 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 310.1 K
ALPHA= 2.10	Z/D= 5.33	PHI= 30.	ALPHA= 2.10	Z/D= 5.33	PHI= 30.
RPM= 0.	PW = 4.60 KPA	REL=7188396.	RPM= 20000.	PW = 4.60 KPA	REL=7184534.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.331
.021	.955	.966	.950	.584	.416
.035	.960	.974	1.097	.676	.463
.042	.965	.976	1.249	.726	.497
.073	.974	.981	1.550	.762	.526
.100	.977	.983	1.715	.785	.548
.129	.981	.986	1.884	.821	.587
.146	.983	.987	1.981	.838	.608
.202	.986	.988	2.135	.849	.625
.248	.987	.989	2.211	.864	.646
.308	.988	.990	2.285	.879	.670
.357	.989	.991	2.361	.891	.743
.416	.990	.992	2.443	.917	.771
.469	.992	.993	2.522	.929	.796
.522	.993	.994	2.596	.939	.826
.587	.994	.996	2.683	.950	.854
.631	.994	.996	2.736	.960	.884
.690	.996	.998	2.831	.969	.913
.748	.998	.999	2.911	.978	.939
.807	.998	.999	3.028	.985	.960
.866	.999	1.000	3.141	.991	.974
.926	.999	1.000	3.209	.994	.983
1.041	1.000	1.000	3.288	.996	.991
1.097	1.000	1.000	3.323	.998	.995
1.155	1.000	1.000	3.353	1.000	.997
1.274	1.000	1.000	3.378	1.000	.997
1.340	1.000	1.000	3.384	1.000	.997

DEL = .3599	DELU= .0484	DEL*= .1347 CM
THETA= .02181	H = 6.179	UE = 658.5 M/SEC
RHOE= .1714	KG/M**3	RUN = 226

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.331
.021	.955	.966	.950	.584	.416
.035	.960	.974	1.097	.676	.463
.042	.965	.976	1.249	.726	.497
.073	.974	.981	1.550	.762	.526
.100	.977	.983	1.715	.785	.548
.129	.981	.986	1.884	.821	.587
.146	.983	.987	1.981	.838	.608
.202	.986	.988	2.135	.849	.625
.248	.987	.989	2.211	.864	.646
.308	.988	.990	2.285	.879	.670
.357	.989	.991	2.361	.891	.743
.416	.990	.992	2.443	.917	.771
.469	.992	.993	2.522	.929	.796
.522	.993	.994	2.596	.939	.826
.587	.994	.996	2.683	.950	.854
.631	.994	.996	2.736	.960	.884
.690	.996	.998	2.831	.969	.913
.748	.996	.998	2.911	.978	.939
.807	.998	.999	3.028	.985	.960
.866	.998	1.000	3.141	.991	.974
.926	.999	1.000	3.209	.994	.983
1.041	1.000	1.000	3.288	.996	.991
1.097	1.000	1.000	3.323	.998	.995
1.155	1.000	1.000	3.353	1.000	.997
1.274	1.000	1.000	3.378	1.000	.997
1.340	1.000	1.000	3.384	1.000	.997

DEL = .3547	DELU= .0494	DEL*= .1342 CM
THETA= .02134	H = 6.288	UE = 658.6 M/SEC
RHOE= .1713	KG/M**3	RUN = 227

MACH = 3.00	P0 = 299.9 KPA	T0 = 310.0 K	MACH = 3.00	T/T0	TT/T0	Y/DEL	T/T0	TT/T0	Y/DEL	P0 = 299.0 KPA	T0 = 309.8 K
ALPHA= 2.10	Z/D= 5.33	PHI= 60.	ALPHA= 2.10	Z/D= 5.33	PHI= 60.	ALPHA= 2.10	Z/D= 5.33	PHI= 60.	ALPHA= 2.10	Z/D= 5.33	PHI= 60.
RPM= 0.	PW = 4.55 KPA	REL=7219717.	RPM= 2000.	PW = 4.54 KPA	REL=7211420.	RPM= 2000.	PW = 4.54 KPA	REL=7211420.	RPM= 2000.	PW = 4.54 KPA	REL=7211420.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.326	.000	.916	.916	.000	.000	.327
.020	.955	.807	.960	.460	.371	.038	.964	.742	1.222	.562	.403
.028	.958	.787	1.043	.494	.380	.053	.969	.696	1.403	.625	.430
.039	.963	.749	1.196	.553	.399	.077	.975	.640	1.619	.692	.468
.050	.969	.703	1.374	.615	.425	.111	.979	.591	1.812	.744	.506
.078	.975	.641	1.613	.690	.466	.147	.983	.551	1.981	.785	.544
.101	.978	.600	1.775	.734	.498	.197	.985	.522	2.106	.813	.574
.151	.982	.552	1.972	.783	.541	.253	.986	.504	2.189	.830	.594
.203	.985	.524	2.097	.810	.570	.296	.987	.476	2.320	.855	.629
.252	.986	.508	2.168	.825	.588	.347	.988	.456	2.421	.873	.657
.295	.987	.496	2.224	.836	.603	.402	.990	.427	2.491	.885	.677
.349	.988	.478	2.308	.852	.625	.448	.991	.412	2.653	.896	.701
.407	.989	.460	2.399	.869	.650	.499	.992	.398	2.736	.910	.726
.454	.991	.445	2.475	.882	.671	.555	.993	.384	2.820	.922	.752
.507	.991	.431	2.551	.894	.694	.614	.994	.371	2.903	.933	.780
.561	.992	.417	2.628	.906	.717	.673	.995	.360	2.975	.944	.808
.616	.994	.399	2.727	.920	.748	.728	.995	.344	3.079	.953	.832
.665	.995	.383	2.823	.933	.779	.779	.996	.329	3.189	.965	.869
.725	.995	.372	2.895	.943	.804	.847	.997	.315	3.293	.977	.910
.780	.996	.363	2.955	.950	.824	.930	.998	.307	3.360	.988	.950
.853	.997	.345	3.073	.964	.866	1.027	.999	.303	3.388	.994	.976
.943	.998	.327	3.205	.978	.914	1.141	1.000	.302	3.400	.997	.987
1.018	.999	.316	3.290	.987	.947	1.254	1.000	.301	3.410	.998	.991
1.131	.999	.307	3.358	.993	.973	1.363	1.000			.999	.995
1.245	.999	.303	3.388	.996	.985	1.470	1.000				
1.356	1.000	.302	3.400	.997	.990						
1.470	1.000	.300	3.410	.998	.994						

DEL = .3839	DELU= .0532	DEL*= .1488 CM	DEL = .3851	DELU= .0532	DEL*= .1471 CM
THETA= .02380	H = 6.252	UE = 660.9 M/SEC	THETA= .02333	H = 6.307	UE = 660.4 M/SEC
RHOE= .1723 KG/M**3		RUN = 244	RHOE= .1716 KG/M**3		RUN = 245

MACH = 3.00	P0 = 298.0 KPA	T0 = 309.4 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 309.9 K
ALPHA= 2.10	Z/D= 5.33	PHI= 120.	ALPHA= 2.10	Z/D= 5.33	PHI= 120.
RPM= 0.	PW = 4.55 KPA	REL=7223563.	RPM= 20000.	PW = 4.55 KPA	REL=7192505.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.016	.951	.833	.841	.593	.418
.032	.959	.783	1.059	.649	.445
.044	.965	.729	1.271	.693	.470
.060	.970	.689	1.428	.730	.497
.087	.976	.632	1.648	.762	.524
.118	.979	.598	1.786	.788	.548
.148	.981	.572	1.892	.803	.564
.191	.983	.551	1.979	.814	.577
.234	.984	.535	2.048	.829	.594
.276	.986	.519	2.120	.845	.616
.314	.987	.505	2.182	.863	.641
.360	.988	.491	2.251	.880	.669
.425	.990	.468	2.361	.892	.691
.488	.991	.448	2.462	.908	.723
.526	.992	.438	2.514	.933	.779
.595	.994	.419	2.619	.952	.828
.684	.996	.394	2.762	.967	.875
.774	.997	.369	2.920	.981	.922
.863	.999	.348	3.056	.991	.962
.947	1.000	.331	3.178	.997	.984
1.045	1.001	.316	3.293	.999	.994
1.138	1.002	.308	3.359		
1.217	1.002	.304	3.390		

DEL = .4765	DELU= .0699	DEL*= .1929 CM
THETA= .03047	H = 6.331	UE = 658.6 M/SEC
RHOE= .1716 KG/M**3		RUN = 251

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.049	.966	.721	1.306	.593	.418
.065	.971	.677	1.474	.649	.445
.084	.975	.640	1.618	.693	.470
.105	.978	.606	1.752	.730	.497
.137	.981	.575	1.879	.762	.524
.181	.983	.549	1.987	.788	.548
.229	.984	.534	2.053	.803	.564
.261	.985	.522	2.106	.814	.577
.306	.986	.507	2.176	.829	.594
.357	.988	.489	2.257	.845	.616
.415	.989	.470	2.353	.863	.641
.476	.991	.450	2.449	.880	.669
.521	.992	.436	2.524	.892	.691
.587	.993	.417	2.630	.908	.723
.694	.995	.387	2.804	.933	.779
.787	.997	.364	2.950	.952	.828
.873	.998	.344	3.082	.967	.875
.966	.999	.327	3.207	.981	.922
1.061	1.000	.313	3.311	.991	.962
1.151	1.000	.306	3.367	.997	.984
1.239	1.001	.303	3.392	.999	.994

DEL = .4694	DELU= .0698	DEL*= .1875 CM
THETA= .02943	H = 6.370	UE = 659.3 M/SEC
RHOE= .1706 KG/M**3		RUN = 252



MACH = 3.00	P0 = 298.4 KPA	T0 = 317.8 K	
ALPHA= 2.10	Z/D= 5.33	PHI= 150.	
RPM= 0.	PW = 4.67 KPA	REL=6948045.	

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.014	.954	.812	.937	.452	.371
.030	.964	.744	1.214	.560	.404
.049	.969	.696	1.403	.626	.433
.065	.973	.663	1.530	.666	.454
.093	.976	.625	1.677	.709	.482
.123	.979	.598	1.783	.738	.503
.157	.980	.581	1.855	.756	.518
.192	.981	.567	1.912	.770	.531
.227	.983	.554	1.967	.783	.543
.262	.983	.540	2.025	.796	.557
.295	.985	.527	2.082	.809	.571
.368	.987	.499	2.209	.835	.603
.441	.989	.471	2.345	.861	.639
.515	.991	.446	2.470	.883	.675
.585	.992	.424	2.590	.902	.710
.663	.994	.400	2.726	.922	.753
.743	.995	.376	2.871	.942	.801
.819	.997	.354	3.010	.959	.849
.890	.998	.338	3.121	.971	.889
.974	.999	.325	3.223	.982	.928
1.057	.999	.314	3.303	.990	.958
1.134	1.000	.307	3.355	.995	.979
1.216	1.000	.303	3.388	.998	.992

DEL = .5526	DELU= .0822	DEL*= .2252 CM
THETA= .03614	H = 6.233	UE = 667.8 M/SEC
RHOE= .1713	KG/M**3	RUN = 455

MACH = 3.00	P0 = 298.3 KPA	T0 = 318.0 K
ALPHA= 2.10	Z/D= 5.33	PHI= 150.
RPM= 20000.	PW = 4.67 KPA	REL=6939168.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.329
.043	.964	.916	1.255	.575	.411
.068	.972	.671	1.499	.657	.449
.092	.975	.633	1.645	.700	.476
.125	.979	.598	1.784	.738	.504
.158	.980	.580	1.859	.757	.520
.190	.981	.565	1.922	.773	.534
.229	.983	.550	1.984	.787	.548
.297	.985	.524	2.095	.812	.575
.372	.987	.497	2.221	.838	.607
.444	.989	.471	2.346	.861	.640
.519	.991	.445	2.477	.884	.678
.589	.992	.421	2.603	.904	.715
.667	.994	.397	2.739	.924	.758
.749	.995	.376	2.869	.941	.801
.827	.997	.357	2.995	.957	.845
.902	.998	.339	3.119	.971	.890
.982	.998	.323	3.230	.983	.932
1.068	.999	.313	3.314	.991	.964
1.144	1.000	.307	3.360	.996	.982
1.226	1.000	.304	3.387	.998	.993

DEL = .5477	DELU= .0848	DEL*= .2250 CM
THETA= .03545	H = 6.348	UE = 667.9 M/SEC
RHOE= .1709	KG/M**3	RUN = 456

MACH = 3.00	P0 = 298.4 KPA	T0 = 310.2 K	MACH = 3.00	P0 = 298.4 KPA	T0 = 310.4 K
ALPHA= 2.10	Z/D= 5.33	PHI= 170.	ALPHA= 2.10	Z/D= 5.33	PHI= 170.
RPM= 0.	PW = 4.74 KPA	REL=7192098.	RPM= 20000.	PW = 4.73 KPA	REL=7178233.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.331
.013	.950	.730	1.269	.581	.416
.026	.960	.704	1.370	.616	.431
.045	.969	.678	1.471	.649	.448
.063	.973	.649	1.582	.683	.468
.092	.976	.635	1.635	.699	.478
.123	.979	.600	1.776	.737	.506
.159	.980	.582	1.847	.755	.521
.189	.981	.570	1.902	.769	.534
.256	.984	.543	2.012	.795	.560
.329	.986	.517	2.131	.821	.589
.397	.988	.491	2.250	.845	.620
.471	.990	.465	2.375	.868	.654
.542	.991	.442	2.493	.889	.688
.615	.993	.419	2.619	.908	.726
.688	.994	.397	2.741	.926	.765
.768	.996	.377	2.866	.943	.807
.845	.997	.358	2.984	.958	.849
.916	.998	.341	3.103	.972	.892
.998	.999	.327	3.205	.983	.930
1.071	1.000	.315	3.298	.992	.966
1.149	1.000	.308	3.351	.997	.987

DEL = .5711	DELU = .0856	DEL* = .2327 CM	DEL* = .2353 CM
THETA= .03774	H = 6.166	UE = 658.3 M/SEC	UE = 658.6 M/SEC
RHOE= .1752 KG/M**3		RUN = 298	RUN = 299

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.331
.033	.933	.730	1.269	.581	.416
.044	.969	.704	1.370	.616	.431
.056	.971	.678	1.471	.649	.448
.073	.974	.649	1.582	.683	.468
.082	.975	.635	1.635	.699	.478
.119	.978	.600	1.776	.737	.506
.153	.980	.582	1.847	.755	.521
.187	.982	.570	1.902	.769	.534
.254	.983	.543	2.012	.795	.560
.323	.986	.517	2.131	.821	.589
.393	.988	.491	2.250	.845	.620
.466	.990	.465	2.375	.868	.654
.535	.991	.442	2.493	.889	.688
.609	.993	.419	2.619	.908	.726
.682	.994	.397	2.741	.926	.765
.756	.996	.377	2.866	.943	.807
.832	.997	.358	2.984	.958	.849
.909	.998	.341	3.103	.972	.892
.981	.999	.327	3.205	.983	.930
1.060	1.000	.315	3.298	.992	.966
1.133	1.000	.308	3.351	.997	.987

DEL = .5777	DELU = .0872	DEL* = .2353 CM
THETA= .03785	H = 6.216	UE = 658.6 M/SEC
RHOE= .1749 KG/M**3		RUN = 299

MACH = 3.00	P0 = 297.4 KPA	T0 = 318.3 K	MACH = 3.00	P0 = 297.4 KPA	T0 = 318.2 K
ALPHA= 2.10	Z/D= 5.33	PHI= 180.	ALPHA= 2.10	Z/D= 5.33	PHI= 180.
RPM= 0.	PW = 4.71 KPA	REL=6912994.	RPM= 20000.	PW = 4.71 KPA	REL=6912994.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.333
.014	.955	.806	.962	1.375	.619
.030	.964	.743	1.218	1.508	.456
.042	.969	.700	1.385	.661	.714
.063	.973	.665	1.523	.738	.508
.090	.976	.625	1.675	.756	.523
.125	.979	.599	1.779	.770	.535
.156	.980	.584	1.841	.797	.562
.189	.981	.570	1.899	.822	.591
.259	.983	.544	2.010	.847	.623
.325	.985	.519	2.118	.868	.655
.392	.987	.494	2.235	.890	.691
.464	.989	.468	2.362	.909	.728
.538	.991	.443	2.489	.928	.769
.611	.992	.417	2.629	.943	.807
.680	.994	.395	2.753	.959	.851
.760	.995	.373	2.886	.972	.894
.835	.997	.356	3.001	.984	.935
.912	.998	.340	3.109	.993	.968
.987	.999	.326	3.209	.997	.988
1.067	.999	.315	3.294		
1.145	1.000	.309	3.346		

DEL = .5588	DELU= .0829	DEL*= .2259 CM
THETA= .03694	H = 6.115	UE = 666.5 M/SEC
RHOE= .1703 KG/M**3		RUN = 463

DEL = .5581	DELU= .0850	DEL*= .2272 CM
THETA= .03640	H = 6.243	UE = 666.5 M/SEC
RHOE= .1704 KG/M**3		RUN = 464

MACH = 3.00	P0 = 298.2 KPA	T0 = 310.2 K			
ALPHA= 2.10	Z/D= 5.33	PHI= 190.			
RPM= 0.	PW = 4.74 KPA	REL=7204549.			
Y/DEL	T/T0	U/UE	RHO/RHOE		
0.000	.917	0.000	.332		
.013	.842	.393	.361		
.023	.950	.799	.332		
.027	.811	.940	.374		
.037	.960	1.073	.390		
.057	.964	1.197	.406		
.073	.971	1.444	.444		
.099	.973	1.546	.461		
.123	.977	1.688	.488		
.152	.979	1.768	.505		
.175	.980	1.828	.517		
.205	.981	1.870	.526		
.232	.982	1.921	.538		
.258	.983	1.968	.549		
.283	.984	2.010	.559		
.311	.985	2.053	.569		
.332	.986	2.103	.581		
.360	.986	2.183	.601		
.387	.988	2.232	.614		
.413	.989	2.273	.625		
.442	.989	2.314	.636		
.497	.991	2.402	.661		
.519	.991	2.433	.670		
.545	.991	2.484	.685		
.577	.992	2.531	.699		
.640	.994	2.638	.732		
.678	.995	2.698	.751		
.713	.995	2.757	.770		
.787	.997	2.882	.812		
.827	.997	2.944	.834		
.860	.998	3.004	.855		
.933	.999	3.123	.898		
.976	1.000	3.186	.922		
1.010	1.000	3.240	.943		
1.053	1.000	3.288	.962		
1.088	1.001	3.319	.974		
1.162	1.001	3.359	.990		
DEL = .5763	DELU= .0885	DEL*= .2397 CM			
THETA= .03856	H = 6.217	UE = 657.9 M/SEC			
RHOE= .1760 KG/M**3		RUN = 286			
Y/DEL	TT/T0	U/UE	RHO/RHOE		
0.000	.916	0.000	.328		
.027	.958	1.043	.382		
.036	.963	1.210	.403		
.058	.971	1.446	.439		
.073	.974	1.553	.457		
.107	.977	1.705	.486		
.132	.979	1.778	.501		
.162	.980	1.840	.514		
.209	.982	1.920	.532		
.229	.982	1.961	.541		
.259	.983	2.009	.552		
.287	.984	2.053	.563		
.339	.986	2.145	.585		
.367	.987	2.193	.597		
.384	.987	2.220	.605		
.417	.988	2.281	.621		
.447	.989	2.336	.635		
.465	.990	2.363	.643		
.487	.990	2.400	.653		
.511	.991	2.446	.666		
.562	.992	2.537	.693		
.592	.993	2.587	.708		
.625	.993	2.651	.728		
.664	.994	2.712	.747		
.699	.995	2.776	.768		
.732	.995	2.835	.787		
.772	.996	2.897	.808		
.809	.997	2.959	.830		
.844	.998	3.022	.852		
.879	.998	3.075	.871		
.919	.999	3.135	.893		
.956	.999	3.194	.915		
.993	.999	3.241	.933		
1.068	1.000	3.319	.962		
1.141	1.001	3.362	.980		
1.217	1.001	3.384	.998		
1.256	1.001	3.393	.999		
DEL = .5876	DELU= .0911	DEL*= .2449 CM			
THETA= .03861	H = 6.343	UE = 660.1 M/SEC			
RHOE= .1775 KG/M**3		RUN = 287			

MACH = 3.00 P0 = 298.5 KPA T0 = 311.0 K  
 ALPHA= 2.10 Z/D= 5.33 PHI= 210.  
 RPM= 20000. PW = 4.67 KPA REL=7123\*18.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.328
.014	.951	.916	1.232	.564	.406
.030	.961	.964	1.374	.613	.427
.044	.967	.967	1.491	.651	.446
.060	.971	.971	1.626	.692	.471
.087	.975	.974	1.756	.727	.496
.121	.978	.977	1.841	.749	.514
.156	.980	.979	1.899	.763	.527
.189	.980	.980	1.978	.782	.545
.239	.982	.981	2.067	.802	.566
.290	.984	.983	2.158	.821	.588
.349	.985	.984	2.246	.838	.611
.399	.987	.985	2.344	.857	.637
.453	.989	.986	2.425	.871	.660
.507	.990	.987	2.529	.888	.690
.568	.991	.988	2.627	.903	.720
.622	.993	.989	2.732	.919	.753
.677	.994	.991	2.832	.932	.786
.735	.995	.992	2.933	.945	.820
.798	.996	.993	3.094	.952	.841
.852	.998	.993	3.186	.964	.877
.914	.999	.994	3.266	.974	.911
.969	1.000	.995	3.327	.982	.941
1.025	1.000	.995	3.363	.988	.965
1.088	1.001	.995	3.402	.991	.979
1.120	1.001	.995	3.413	.994	.989
1.165	1.001	.995		.995	.995
1.204	1.002	.995		.996	1.000
1.247	1.002				
1.285	1.002				
1.327	1.002				

DEL = .5569 DELU= .0894 DEL\*= .2360 CM  
 THETA= .03595 H = 6.197 UE = 663.6 M/SEC  
 RHOE= .1752 KG/M\*\*3 RUN = 223

MACH = 3.00 P0 = 298.4 KPA T0 = 313.1 K  
 ALPHA= 2.10 Z/D= 5.33 PHI= 210.  
 RPM= 0. PW = 4.67 KPA REL=713\*186.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.326
.014	.951	.831	.849	.414	.359
.030	.961	.753	1.176	.546	.396
.044	.967	.706	1.359	.611	.422
.060	.971	.666	1.515	.661	.448
.087	.975	.628	1.662	.705	.475
.121	.978	.594	1.799	.742	.502
.156	.980	.574	1.879	.762	.519
.189	.980	.559	1.940	.777	.533
.239	.982	.540	2.022	.795	.552
.290	.984	.521	2.106	.814	.572
.349	.985	.502	2.196	.832	.594
.399	.987	.482	2.286	.850	.618
.453	.989	.463	2.382	.867	.644
.507	.990	.445	2.473	.883	.670
.568	.991	.425	2.580	.900	.701
.622	.993	.409	2.673	.914	.730
.677	.994	.394	2.761	.927	.758
.735	.995	.378	2.860	.940	.791
.798	.996	.363	2.956	.952	.823
.852	.998	.350	3.044	.962	.854
.914	.999	.336	3.140	.973	.889
.969	1.000	.326	3.216	.981	.917
1.025	1.000	.317	3.281	.988	.942
1.088	1.001	.310	3.341	.994	.965
1.120	1.001	.307	3.362	.996	.973
1.165	1.001	.305	3.380	.997	.980
1.204	1.002	.304	3.391	.998	.985
1.247	1.002	.303	3.398	.999	.988
1.285	1.002	.303	3.403	.999	.990
1.327	1.002	.301	3.412	1.000	.993

DEL = .5569 DELU= .0820 DEL\*= .2282 CM  
 THETA= .03595 H = 6.348 UE = 662.9 M/SEC  
 RHOE= .1752 KG/M\*\*3 RUN = 222

MACH = 3.00	P0 = 298.0 KPA	T0 = 310.1 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 309.6 K
ALPHA = 2.10	Z/D = 5.33	PHI = 240.	ALPHA = 2.10	Z/D = 5.33	PHI = 240.
RPM = 0.	PW = 4.55 KPA	REL = 7167032.	RPM = 20000.	PW = 4.55 KPA	REL = 7185458.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.328
.016	.953	.967	1.346	.606	.424
.033	.964	.971	1.452	.641	.441
.057	.971	.974	1.592	.684	.465
.082	.975	.976	1.660	.704	.478
.113	.979	.978	1.783	.737	.503
.176	.982	.981	1.898	.766	.528
.237	.984	.983	2.001	.790	.551
.301	.986	.984	2.090	.810	.572
.366	.987	.986	2.199	.832	.600
.432	.989	.988	2.303	.852	.628
.499	.990	.990	2.451	.878	.669
.557	.991	.991	2.554	.895	.699
.631	.992	.993	2.672	.913	.735
.699	.994	.994	2.785	.929	.772
.764	.995	.995	2.897	.944	.809
.838	.996	.996	3.006	.957	.848
.899	.997	.997	3.107	.969	.884
.971	.998	.998	3.212	.980	.923
1.040	.998	.998	3.282	.987	.950
1.092	.998	.999	3.338	.993	.972
1.129	.998	.999	3.368	.995	.984
1.183	.999	.999	3.386	.997	.991
1.229	.999	.999	3.398	.998	.996
1.269	.998	.999	3.400	.998	.997

DEL = .4661	DELU = .0669	DEL* = .1842 CM	DEL = .4734	DELU = .0716	DEL* = .1921 CM
THETA = .02989	H = 6.164	UE = 660.2 M/SEC	THETA = .03049	H = 6.301	UE = 659.8 M/SEC
RHOE = .1705 KG/M**3		RUN = 234	RHOE = .1709 KG/M**3		RUN = 235



MACH = 3.00	P0 = 297.8 KPA	T0 = 310.3 K	MACH = 3.00	P0 = 297.6 KPA	T0 = 310.5 K
ALPHA= 2.10	Z/D= 5.33	PHI= 300.	ALPHA= 2.10	Z/D= 5.33	PHI= 300.
RPM= 0.	PW = 4.52 KPA	REL=7175612.	RPM= 20000.	PW = 4.53 KPA	REL=7164669.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.326
.020	.956	.801	.985	.471	.428
.034	.964	.744	1.216	.560	.473
.051	.969	.699	1.388	.620	.508
.075	.975	.639	1.620	.692	.559
.101	.979	.592	1.809	.744	.599
.150	.983	.538	2.033	.797	.614
.226	.987	.500	2.207	.834	.627
.309	.988	.479	2.305	.853	.652
.391	.990	.456	2.421	.873	.683
.471	.991	.436	2.524	.890	.719
.545	.993	.417	2.626	.906	.762
.633	.994	.394	2.759	.926	.797
.714	.996	.377	2.862	.939	.845
.805	.997	.355	3.005	.957	.906
.923	.999	.331	3.172	.976	.955
1.025	1.000	.316	3.290	.988	.986
1.154	1.001	.302	3.398	.998	

DEL = .3718	DELU= .0494	DEL*= .1410 CM
THETA= .02255	H = 6.252	UE = 660.7 M/SEC
RHOE= .1704	KG/M**3	RUN = 253

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.326
.040	.969	.698	1.391	.621	.428
.071	.975	.632	1.648	.700	.473
.103	.979	.588	1.823	.747	.508
.164	.984	.535	2.048	.800	.559
.267	.986	.499	2.210	.834	.599
.304	.987	.487	2.268	.845	.614
.338	.988	.477	2.315	.854	.627
.397	.989	.458	2.407	.870	.652
.466	.991	.437	2.516	.889	.683
.548	.992	.416	2.634	.907	.719
.637	.994	.392	2.769	.926	.762
.713	.995	.375	2.876	.941	.797
.806	.997	.354	3.015	.958	.845
.923	.998	.330	3.184	.976	.906
1.043	.999	.313	3.310	.989	.955
1.162	1.000	.303	3.391	.997	.986

DEL = .3697	DELU= .0499	DEL*= .1407 CM
THETA= .02236	H = 6.291	UE = 661.2 M/SEC
RHOE= .1704	KG/M**3	RUN = 254

MACH = 3.00	P0 = 298.3 KPA	T0 = 309.9 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 310.1 K
ALPHA= 2.10	Z/D= 5.33	PHI= 330.	ALPHA= 2.10	Z/D= 5.33	PHI= 330.
RPM= 0.	PW = 4.60 KPA	REL=7187593.	RPM= 20000.	PW = 4.60 KPA	REL=7186268.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.330
.022	.956	.971	.985	.644	.443
.033	.961	.974	1.109	.681	.464
.047	.968	.978	1.345	.725	.495
.072	.974	.980	1.575	.754	.518
.092	.978	.982	1.738	.783	.544
.138	.983	.985	1.964	.813	.577
.177	.985	.986	2.088	.830	.598
.214	.987	.987	2.186	.843	.615
.274	.988	.988	2.278	.858	.635
.326	.989	.989	2.330	.872	.657
.383	.990	.991	2.409	.887	.683
.441	.991	.992	2.496	.900	.708
.495	.992	.993	2.569	.914	.736
.555	.993	.994	2.639	.925	.761
.605	.994	.995	2.730	.937	.789
.668	.995	.996	2.831	.946	.815
.725	.996	.997	2.927	.957	.845
.782	.997	.998	3.017	.967	.876
.845	.998	.999	3.093	.976	.907
.906	.999	.999	3.149	.983	.932
.961	.999	.999	3.203	.989	.955
1.023	.999	.999	3.261	.993	.971
1.082	1.000	.999	3.316	.996	.984
1.150	1.000	1.000	3.357	.998	.991
1.210	1.000	1.000	3.376	.999	.995
1.268	1.000	1.000	3.387	1.000	.998
1.329	1.000	1.000	3.391		

DEL = .3494	DELU= .0457	DEL*= .1285 CM	DEL*= .1289 CM
THETA= .02075	H = 6.191	UE = 658.9 M/SEC	UE = 659.2 M/SEC
RHOE= .1716 KG/M**3		RUN = 277	RUN = 278

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.330
.057	.971	.971	1.456	.644	.443
.067	.974	.974	1.576	.681	.464
.092	.978	.978	1.733	.725	.495
.113	.980	.980	1.844	.754	.518
.139	.982	.982	1.964	.783	.544
.183	.985	.985	2.098	.813	.577
.225	.986	.986	2.182	.830	.598
.280	.987	.987	2.248	.843	.615
.332	.988	.988	2.323	.858	.635
.392	.989	.989	2.402	.872	.657
.452	.991	.991	2.491	.887	.683
.508	.992	.992	2.574	.900	.708
.565	.993	.993	2.664	.914	.736
.622	.994	.994	2.743	.925	.761
.682	.995	.995	2.828	.937	.789
.739	.996	.996	2.904	.946	.815
.802	.996	.996	2.990	.957	.845
.864	.997	.997	3.076	.967	.876
.924	.998	.998	3.161	.976	.907
.982	.999	.999	3.225	.983	.932
1.047	.999	.999	3.285	.989	.955
1.110	.999	.999	3.328	.993	.971
1.172	1.000	.999	3.358	.996	.984
1.236	1.000	1.000	3.376	.998	.991
1.295	1.000	1.000	3.388	.999	.995
1.357	1.000	1.000	3.394	1.000	.998

DEL = .3421	DELU= .0471	DEL*= .1289 CM
THETA= .02044	H = 6.307	UE = 659.2 M/SEC
RHOE= .1719 KG/M**3		RUN = 278



MACH = 3.00 ALPHA = 0.00 RPM = 0.00				P0 = 298.9 KPA Z/D = 5.67 PW = 4.88 KPA				T0 = 310.4 K PHI = 0.00 REL = 7243553.				MACH = 3.00 ALPHA = 0.00 RPM = 0.00				P0 = 297.8 KPA Z/D = 5.67 PW = 4.87 KPA				T0 = 312.3 K PHI = 60.00 REL = 7119947.			
Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343	.000	.918	.918	.000	.000	.343	.000	.918	.918	.000	.000	.343	.000	.918	.918	.000	.000	.343
.017	.956	.812	.940	.459	.388	.017	.957	.809	.955	.464	.389	.017	.957	.809	.955	.464	.389	.017	.957	.809	.955	.464	.389
.030	.962	.774	1.101	.525	.407	.024	.961	.778	1.082	.516	.404	.024	.961	.778	1.082	.516	.404	.024	.961	.778	1.082	.516	.404
.041	.966	.744	1.222	.571	.424	.039	.967	.732	1.264	.585	.430	.039	.967	.732	1.264	.585	.430	.039	.967	.732	1.264	.585	.430
.052	.969	.716	1.330	.610	.440	.059	.971	.695	1.407	.634	.452	.059	.971	.695	1.407	.634	.452	.059	.971	.695	1.407	.634	.452
.071	.973	.683	1.456	.652	.461	.078	.973	.669	1.509	.667	.470	.078	.973	.669	1.509	.667	.470	.078	.973	.669	1.509	.667	.470
.089	.975	.663	1.533	.677	.475	.096	.976	.648	1.590	.692	.486	.096	.976	.648	1.590	.692	.486	.096	.976	.648	1.590	.692	.486
.108	.977	.644	1.608	.700	.490	.113	.977	.632	1.650	.709	.498	.113	.977	.632	1.650	.709	.498	.113	.977	.632	1.650	.709	.498
.138	.979	.619	1.706	.728	.509	.150	.979	.604	1.764	.740	.521	.150	.979	.604	1.764	.740	.521	.150	.979	.604	1.764	.740	.521
.174	.981	.595	1.804	.754	.530	.180	.981	.584	1.844	.761	.539	.180	.981	.584	1.844	.761	.539	.180	.981	.584	1.844	.761	.539
.215	.984	.570	1.907	.780	.554	.222	.983	.563	1.933	.783	.560	.222	.983	.563	1.933	.783	.560	.222	.983	.563	1.933	.783	.560
.248	.985	.553	1.977	.797	.570	.260	.985	.544	2.011	.801	.578	.260	.985	.544	2.011	.801	.578	.260	.985	.544	2.011	.801	.578
.278	.986	.540	2.032	.810	.584	.300	.986	.528	2.084	.818	.597	.300	.986	.528	2.084	.818	.597	.300	.986	.528	2.084	.818	.597
.321	.988	.522	2.112	.827	.604	.336	.987	.514	2.144	.831	.612	.336	.987	.514	2.144	.831	.612	.336	.987	.514	2.144	.831	.612
.360	.989	.508	2.177	.841	.621	.370	.988	.501	2.205	.843	.628	.370	.988	.501	2.205	.843	.628	.370	.988	.501	2.205	.843	.628
.397	.990	.496	2.231	.852	.636	.414	.989	.487	2.268	.855	.646	.414	.989	.487	2.268	.855	.646	.414	.989	.487	2.268	.855	.646
.427	.991	.485	2.284	.862	.651	.452	.989	.475	2.329	.867	.663	.452	.989	.475	2.329	.867	.663	.452	.989	.475	2.329	.867	.663
.467	.992	.475	2.334	.871	.665	.494	.991	.462	2.392	.878	.681	.494	.991	.462	2.392	.878	.681	.494	.991	.462	2.392	.878	.681
.506	.993	.462	2.397	.883	.683	.536	.991	.449	2.458	.890	.701	.536	.991	.449	2.458	.890	.701	.536	.991	.449	2.458	.890	.701
.554	.994	.449	2.461	.894	.702	.575	.992	.437	2.518	.900	.719	.575	.992	.437	2.518	.900	.719	.575	.992	.437	2.518	.900	.719
.591	.995	.438	2.518	.903	.720	.616	.993	.426	2.582	.910	.739	.616	.993	.426	2.582	.910	.739	.616	.993	.426	2.582	.910	.739
.630	.996	.427	2.580	.913	.739	.659	.994	.414	2.646	.920	.760	.659	.994	.414	2.646	.920	.760	.659	.994	.414	2.646	.920	.760
.674	.997	.414	2.652	.924	.763	.703	.995	.402	2.718	.930	.784	.703	.995	.402	2.718	.930	.784	.703	.995	.402	2.718	.930	.784
.711	.997	.404	2.712	.933	.783	.746	.996	.390	2.784	.940	.806	.746	.996	.390	2.784	.940	.806	.746	.996	.390	2.784	.940	.806
.757	.998	.391	2.784	.943	.807	.786	.996	.381	2.843	.948	.827	.786	.996	.381	2.843	.948	.827	.786	.996	.381	2.843	.948	.827
.797	.999	.382	2.845	.952	.828	.831	.997	.369	2.917	.957	.853	.831	.997	.369	2.917	.957	.853	.831	.997	.369	2.917	.957	.853
.840	1.000	.371	2.912	.960	.852	.876	.998	.358	2.992	.967	.881	.876	.998	.358	2.992	.967	.881	.876	.998	.358	2.992	.967	.881
.889	1.001	.361	2.978	.969	.876	.917	.999	.350	3.043	.973	.899	.917	.999	.350	3.043	.973	.899	.917	.999	.350	3.043	.973	.899
.928	1.001	.354	3.027	.974	.894	.964	.999	.341	3.104	.980	.923	.964	.999	.341	3.104	.980	.923	.964	.999	.341	3.104	.980	.923
.970	1.002	.346	3.081	.981	.914	1.010	.999	.332	3.168	.987	.947	1.010	.999	.332	3.168	.987	.947	1.010	.999	.332	3.168	.987	.947
1.015	1.003	.338	3.137	.987	.936	1.050	1.000	.326	3.218	.992	.967	1.050	1.000	.326	3.218	.992	.967	1.050	1.000	.326	3.218	.992	.967
1.056	1.004	.331	3.185	.992	.955	1.098	1.000	.320	3.258	.996	.983	1.098	1.000	.320	3.258	.996	.983	1.098	1.000	.320	3.258	.996	.983
1.101	1.005	.326	3.227	.997	.971	1.144	1.000	.317	3.282	.998	.993	1.144	1.000	.317	3.282	.998	.993	1.144	1.000	.317	3.282	.998	.993
1.182	1.005	.320	3.272	1.001	.989	1.190	1.000	.316	3.294	1.000	.998	1.190	1.000	.316	3.294	1.000	.998	1.190	1.000	.316	3.294	1.000	.998
1.334	1.005	.318	3.289	1.003	.996																		

DEL = .4576 THETA = .03047 RHOE = .1759 KG/M**3				DEL = .0695 H = 6.087				DEL* = .1855 CM UE = 651.0 M/SEC RUN = 335				DEL = .4549 THETA = .03058 RHOE = .1740 KG/M**3				DEL* = .0688 H = 5.959				DEL* = .1822 CM UE = 655.6 M/SEC RUN = 385			

MACH = 3.00	P0 = 298.1 KPA	T0 = 311.8 K	MACH = 3.00	P0 = 297.3 KPA	T0 = 312.2 K
ALPHA= 2.10	Z/D= 5.67	PHI= 0.	ALPHA= 2.10	Z/D= 5.67	PHI= 0.
RPM= 0.	PW = 4.83 KPA	REL=7163731.	RPM= 20000.	PW = 4.82 KPA	REL=7115158.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342
.021	.960	.685	1.448	.647	.458
.047	.969	.632	1.650	.709	.496
.062	.973	.591	1.813	.753	.530
.092	.977	.561	1.937	.784	.559
.112	.979	.540	2.028	.805	.580
.132	.981	.519	2.120	.825	.604
.177	.984	.502	2.199	.841	.625
.223	.986	.483	2.290	.859	.650
.265	.987	.468	2.362	.873	.670
.313	.988	.455	2.427	.884	.690
.362	.990	.439	2.509	.898	.714
.408	.991	.426	2.578	.909	.736
.457	.992	.414	2.647	.920	.758
.506	.993	.402	2.716	.930	.781
.553	.994	.391	2.782	.939	.803
.608	.995	.379	2.854	.949	.828
.651	.996	.368	2.925	.958	.853
.704	.997	.357	2.997	.967	.879
.744	.997	.348	3.059	.974	.903
.808	.998	.337	3.134	.982	.931
.854	.999	.329	3.195	.989	.955
.908	1.000	.323	3.239	.994	.972
.967	1.000	.322	3.243	.994	.974
1.021	1.001	.318	3.277	.997	.987
1.074	1.002	.316	3.293	.999	.994
1.126	1.002				
1.183	1.002				

DEL = .3575	DELU= .0496	DEL*= .1357 CM
THETA= .02260	H = 6.006	UE = 654.5 M/SEC
RHOE= .1736	KG/M**3	RUN = 338

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342
.057	.972	.685	1.448	.647	.458
.091	.977	.632	1.650	.709	.496
.135	.980	.591	1.813	.753	.530
.183	.983	.561	1.937	.784	.559
.224	.984	.540	2.028	.805	.580
.273	.986	.519	2.120	.825	.604
.317	.988	.502	2.199	.841	.625
.370	.989	.483	2.290	.859	.650
.420	.990	.468	2.362	.873	.670
.464	.991	.455	2.427	.884	.690
.515	.992	.439	2.509	.898	.714
.565	.993	.426	2.578	.909	.736
.609	.994	.414	2.647	.920	.758
.661	.995	.402	2.716	.930	.781
.713	.996	.391	2.782	.939	.803
.766	.997	.379	2.854	.949	.828
.819	.998	.368	2.925	.958	.853
.874	.998	.357	2.997	.967	.879
.921	.999	.348	3.059	.974	.903
.979	.999	.337	3.134	.982	.931
1.034	1.000	.329	3.195	.989	.955
1.084	1.000	.323	3.239	.994	.972
1.091	1.000	.322	3.243	.994	.974
1.148	1.000	.318	3.277	.997	.987
1.199	1.001	.316	3.293	.999	.994

DEL = .3526	DELU= .0513	DEL*= .1350 CM
THETA= .02210	H = 6.107	UE = 655.8 M/SEC
RHOE= .1726	KG/M**3	RUN = 339

MACH = 3.00 ALPHA= 2.10 RPM= 0.				P0 = 298.2 KPA Z/D= 5.67 PW = 4.78 KPA				T0 = 310.9 K PHI= 30. REL=7162905.				MACH = 3.00 ALPHA= 2.10 RPM= 2000.				P0 = 298.1 KPA Z/D= 5.67 PW = 4.78 KPA				T0 = 311.1 K PHI= 30. REL=7169720.			
Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342	.000	.918	.918	.000	.000	.342	.000	.918	.918	.000	.000	.342	.000	.918	.918	.000	.000	.342
.021	.958	.800	.991	.479	.392	.063	.972	.681	1.461	.651	.461	.063	.972	.681	1.461	.651	.461	.063	.972	.681	1.461	.651	.461
.039	.965	.741	1.229	.572	.423	.070	.974	.664	1.525	.671	.473	.070	.974	.664	1.525	.671	.473	.070	.974	.664	1.525	.671	.473
.048	.969	.714	1.337	.610	.440	.094	.976	.635	1.641	.706	.495	.094	.976	.635	1.641	.706	.495	.094	.976	.635	1.641	.706	.495
.076	.974	.663	1.529	.673	.473	.116	.979	.614	1.721	.729	.511	.116	.979	.614	1.721	.729	.511	.116	.979	.614	1.721	.729	.511
.094	.976	.638	1.628	.702	.492	.137	.980	.597	1.790	.747	.526	.137	.980	.597	1.790	.747	.526	.137	.980	.597	1.790	.747	.526
.142	.980	.591	1.817	.754	.531	.184	.983	.563	1.930	.782	.558	.184	.983	.563	1.930	.782	.558	.184	.983	.563	1.930	.782	.558
.184	.983	.561	1.938	.784	.559	.232	.984	.540	2.029	.805	.582	.232	.984	.540	2.029	.805	.582	.232	.984	.540	2.029	.805	.582
.230	.985	.538	2.039	.807	.584	.273	.986	.521	2.111	.823	.603	.273	.986	.521	2.111	.823	.603	.273	.986	.521	2.111	.823	.603
.273	.986	.519	2.122	.826	.605	.321	.987	.502	2.200	.842	.626	.321	.987	.502	2.200	.842	.626	.321	.987	.502	2.200	.842	.626
.319	.988	.500	2.207	.843	.627	.369	.989	.486	2.272	.856	.646	.369	.989	.486	2.272	.856	.646	.369	.989	.486	2.272	.856	.646
.372	.989	.483	2.290	.859	.650	.418	.990	.469	2.355	.871	.670	.418	.990	.469	2.355	.871	.670	.418	.990	.469	2.355	.871	.670
.417	.990	.468	2.361	.872	.670	.466	.991	.454	2.432	.885	.692	.466	.991	.454	2.432	.885	.692	.466	.991	.454	2.432	.885	.692
.460	.991	.454	2.430	.885	.691	.517	.992	.438	2.513	.899	.717	.517	.992	.438	2.513	.899	.717	.517	.992	.438	2.513	.899	.717
.510	.992	.440	2.502	.897	.713	.566	.993	.426	2.577	.909	.737	.566	.993	.426	2.577	.909	.737	.566	.993	.426	2.577	.909	.737
.560	.993	.426	2.578	.909	.736	.618	.994	.413	2.651	.920	.761	.618	.994	.413	2.651	.920	.761	.618	.994	.413	2.651	.920	.761
.610	.994	.413	2.655	.921	.761	.664	.995	.402	2.717	.930	.782	.664	.995	.402	2.717	.930	.782	.664	.995	.402	2.717	.930	.782
.662	.995	.398	2.738	.933	.789	.716	.996	.387	2.805	.942	.812	.716	.996	.387	2.805	.942	.812	.716	.996	.387	2.805	.942	.812
.715	.996	.384	2.823	.945	.818	.768	.996	.375	2.877	.952	.838	.768	.996	.375	2.877	.952	.838	.768	.996	.375	2.877	.952	.838
.766	.997	.374	2.885	.953	.839	.820	.997	.364	2.949	.961	.864	.820	.997	.364	2.949	.961	.864	.820	.997	.364	2.949	.961	.864
.816	.997	.367	2.932	.959	.856	.871	.998	.354	3.017	.969	.888	.871	.998	.354	3.017	.969	.888	.871	.998	.354	3.017	.969	.888
.862	.997	.360	2.977	.964	.873	.931	.998	.342	3.095	.978	.918	.931	.998	.342	3.095	.978	.918	.931	.998	.342	3.095	.978	.918
.914	.998	.350	3.043	.972	.897	.986	.999	.336	3.143	.983	.936	.986	.999	.336	3.143	.983	.936	.986	.999	.336	3.143	.983	.936
.975	.999	.338	3.126	.982	.929	1.042	.999	.327	3.210	.991	.962	1.042	.999	.327	3.210	.991	.962	1.042	.999	.327	3.210	.991	.962
1.028	.999	.329	3.192	.989	.954	1.093	1.000	.321	3.253	.995	.979	1.093	1.000	.321	3.253	.995	.979	1.093	1.000	.321	3.253	.995	.979
1.082	1.000	.323	3.240	.994	.973	1.143	1.000	.318	3.276	.997	.989	1.143	1.000	.318	3.276	.997	.989	1.143	1.000	.318	3.276	.997	.989
1.133	1.000	.319	3.269	.997	.985	1.193	1.000	.316	3.289	.999	.994	1.193	1.000	.316	3.289	.999	.994	1.193	1.000	.316	3.289	.999	.994
1.190	1.000	.316	3.292	.999	.994	1.262	1.000	.315	3.298	1.000	.998	1.262	1.000	.315	3.298	1.000	.998	1.262	1.000	.315	3.298	1.000	.998
1.247	1.001	.315	3.301	1.000	.998																		

DEL = .3663	DELTA = .02330	RHOE = .1737	KG/M**3	DEL = .3653	DELTA = .02282	RHOE = .1734	KG/M**3	DEL = .3653	DELTA = .02282	RHOE = .1734	KG/M**3	DEL = .3653	DELTA = .02282	RHOE = .1734	KG/M**3	DEL = .3653	DELTA = .02282	RHOE = .1734	KG/M**3	DEL = .3653	DELTA = .02282	RHOE = .1734	KG/M**3
DEL* = .1390	UE = .0516	H = 5.968	CM	DEL* = .1390	UE = .0516	H = 5.968	CM	DEL* = .1390	UE = .0516	H = 5.968	CM	DEL* = .1390	UE = .0516	H = 5.968	CM	DEL* = .1390	UE = .0516	H = 5.968	CM	DEL* = .1390	UE = .0516	H = 5.968	CM
UE = 654.4	M/SEC	RUN = 361		UE = 654.4	M/SEC	RUN = 361		UE = 654.4	M/SEC	RUN = 361		UE = 654.4	M/SEC	RUN = 361		UE = 654.4	M/SEC	RUN = 361		UE = 654.4	M/SEC	RUN = 361	

MACH = 3.00	P0 = 298.1 KPA	T0 = 312.1 K	
ALPHA= 2.10	Z/D= 5.67	PHI= 60.	
RPM= 0.	PW = 4.66 KPA	REL=7132613.	

Y/DEL	T/T0	M	U/UE	RHO/RHOE
.000	.917	.000	.000	.337
.000	.917	.000	.000	.337
.020	.957	.987	.475	.386
.028	.960	.987	.515	.398
.040	.966	.987	.578	.421
.055	.970	.987	.630	.444
.079	.974	.987	.675	.469
.103	.976	.987	.705	.488
.147	.980	.987	.747	.520
.187	.982	.987	.773	.543
.232	.984	.987	.799	.569
.280	.986	.987	.821	.594
.324	.987	.987	.838	.615
.369	.988	.987	.851	.633
.414	.990	.987	.865	.654
.460	.991	.987	.878	.675
.506	.992	.987	.893	.700
.550	.993	.987	.904	.722
.605	.994	.987	.917	.748
.652	.994	.987	.927	.771
.699	.995	.987	.938	.797
.750	.996	.987	.949	.825
.796	.997	.987	.957	.849
.853	.998	.987	.966	.875
.906	.998	.987	.973	.899
.953	.999	.987	.980	.921
1.004	.999	.987	.985	.941
1.062	1.000	.987	.991	.961
1.117	1.000	.987	.994	.976
1.171	1.000	.987	.997	.987
1.220	1.000	.987	.999	.994
1.270	1.001	.987	1.000	.998
1.330	1.001	.987	1.000	1.000

DEL = .3797	DELU = .0550	DEL*= .1478 CM
THETA= .02426	H = 6.091	UE = 657.9 M/SEC
RHOE= .1697	KG/M**3	RUN = 379

MACH = 3.00	P0 = 297.9 KPA	T0 = 312.1 K
ALPHA= 2.10	Z/D= 5.67	PHI= 60.
RPM= 20000.	PW = 4.66 KPA	REL=7128593.

Y/DEL	T/T0	M	U/UE	RHO/RHOE
.000	.917	.000	.000	.337
.000	.917	.000	.000	.337
.052	.969	1.360	.615	.438
.061	.971	1.433	.640	.450
.078	.974	1.554	.678	.471
.099	.976	1.654	.707	.490
.146	.980	1.811	.750	.523
.189	.982	1.924	.778	.548
.224	.984	2.007	.797	.568
.275	.985	2.097	.817	.590
.320	.987	2.181	.835	.612
.364	.988	2.267	.852	.635
.407	.989	2.342	.866	.656
.448	.989	2.415	.879	.677
.501	.991	2.495	.892	.701
.546	.992	2.568	.904	.723
.597	.993	2.645	.916	.748
.640	.994	2.711	.926	.769
.689	.994	2.779	.935	.792
.735	.996	2.845	.944	.814
.787	.996	2.921	.954	.841
.843	.997	3.003	.964	.870
.894	.997	3.061	.971	.892
.940	.998	3.132	.979	.918
.995	.998	3.186	.984	.939
1.048	.999	3.243	.990	.961
1.095	1.000	3.287	.995	.979
1.155	1.000	3.315	.998	.990
1.203	1.000	3.327	.999	.995
1.253	1.000	3.335	1.000	.998
1.310	1.000	3.339	1.000	1.000

DEL = .3849	DELU = .0569	DEL*= .1495 CM
THETA= .02423	H = 6.170	UE = 658.0 M/SEC
RHOE= .1694	KG/M**3	RUN = 380

MACH = 3.00	P0 = 298.5 KPA	T0 = 316.1 K	MACH = 3.00	P0 = 298.3 KPA	T0 = 317.1 K
ALPHA = 2.10	Z/D = 5.67	PHI = 120.	ALPHA = 2.10	Z/D = 5.67	PHI = 120.
RPM = 0.	PW = 4.80 KPA	REL = 7030269.	RPM = 20000.	PW = 4.80 KPA	REL = 6994072.

Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.341
.015	.953	.826	.877	.571	.421
.020	.958	.800	.992	.649	.457
.035	.965	.740	1.233	.693	.484
.072	.972	.686	1.443	.749	.525
.109	.975	.655	1.562	.787	.560
.170	.980	.603	1.768	.820	.596
.232	.983	.562	1.936	.844	.626
.309	.986	.531	2.069	.867	.659
.385	.988	.507	2.179	.888	.693
.452	.990	.480	2.304	.907	.729
.530	.992	.454	2.434	.925	.766
.607	.994	.431	2.552	.941	.804
.678	.995	.412	2.662	.955	.843
.751	.997	.393	2.771	.970	.887
.834	.998	.373	2.896	.980	.919
.916	.999	.353	3.028	.992	.963
.994	1.000	.335	3.155	.999	.990
1.076	1.002	.323	3.244	1.001	.998
1.155	1.002	.315	3.299	1.001	
1.239	1.002	.313	3.318	1.001	

OEL = .5216	DELU = .0820	OEL* = .2168 CM
THETA = .03557	H = 6.094	UE = 660.0 M/SEC
RHOE = .1712 KG/M**3		RUN = 418

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.341
.034	.965	.742	1.227	.571	.421
.066	.972	.683	1.453	.649	.457
.105	.976	.647	1.595	.693	.484
.165	.980	.596	1.798	.749	.525
.225	.983	.559	1.950	.787	.560
.299	.986	.525	2.097	.820	.596
.365	.989	.500	2.211	.844	.626
.438	.990	.475	2.332	.867	.659
.511	.992	.451	2.447	.888	.693
.588	.994	.429	2.563	.907	.729
.658	.995	.408	2.680	.925	.766
.725	.996	.389	2.793	.941	.804
.815	.998	.371	2.904	.955	.843
.888	.999	.353	3.026	.970	.887
.961	1.000	.341	3.110	.980	.919
1.052	1.001	.325	3.224	.992	.963
1.124	1.001	.316	3.291	.999	.990
1.202	1.002	.314	3.310	1.001	.998

DEL = .5382	DELU = .0814	OEL* = .2146 CM
THETA = .03513	H = 6.110	UE = 660.8 M/SEC
RHOE = .1702 KG/M**3		RUN = 419



MACH = 3.00	P0 = 298.3 KPA	T0 = 318.6 K	MACH = 3.00	P0 = 298.7 KPA	T0 = 318.1 K
ALPHA = 2.10	Z/D = 5.67	PHI = 150.	ALPHA = 2.10	Z/D = 5.67	PHI = 150.
RPM = 0.	PW = 4.96 KPA	REL = 6918164.	RPM = 20000.	PW = 4.97 KPA	REL = 6963482.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.013	.955	.820	.909	.541	.414
.019	.958	.801	.988	.595	.435
.032	.963	.761	1.154	.641	.457
.047	.967	.729	1.278	.694	.488
.075	.971	.693	1.417	.730	.513
.116	.975	.655	1.565	.758	.536
.162	.978	.621	1.696	.782	.559
.208	.980	.594	1.804	.810	.588
.253	.982	.570	1.901	.821	.600
.299	.984	.549	1.993	.838	.621
.345	.986	.530	2.075	.855	.645
.391	.987	.512	2.155	.870	.668
.443	.988	.494	2.237	.885	.691
.492	.990	.477	2.317	.900	.718
.544	.991	.461	2.398	.912	.742
.591	.992	.446	2.476	.926	.773
.644	.993	.428	2.567	.938	.801
.696	.994	.413	2.651	.949	.829
.750	.995	.399	2.735	.961	.860
.804	.996	.385	2.816	.970	.889
.855	.997	.371	2.907	.980	.921
.911	.998	.356	3.001	.988	.949
.969	.999	.342	3.098	.995	.973
1.020	1.000	.331	3.176	.998	.986
1.076	1.000	.324	3.228	1.000	.992
1.134	1.000	.320	3.258	1.000	.996
1.188	1.000	.318	3.274		
1.247	1.000	.317	3.282		

DEL = .5819	DELU = .0953	DEL* = .2452 CM
THETA = .04104	H = 5.975	UE = 661.7 M/SEC
RHOE = .1722 KG/M**3		RUN = 398

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.033	.963	.763	1.144	.541	.414
.047	.968	.726	1.290	.595	.435
.072	.971	.691	1.425	.641	.457
.117	.976	.647	1.595	.694	.488
.161	.979	.615	1.718	.730	.513
.207	.981	.589	1.824	.758	.536
.253	.983	.565	1.922	.782	.559
.319	.985	.537	2.044	.810	.588
.346	.986	.526	2.092	.821	.600
.393	.988	.509	2.170	.838	.621
.444	.989	.490	2.256	.855	.645
.493	.991	.473	2.338	.870	.668
.545	.992	.457	2.418	.885	.691
.595	.993	.440	2.506	.900	.718
.643	.994	.426	2.584	.912	.742
.698	.995	.409	2.678	.926	.773
.750	.996	.395	2.760	.938	.801
.801	.997	.381	2.842	.949	.829
.855	.998	.368	2.928	.961	.860
.912	.999	.356	3.008	.970	.889
.969	1.000	.343	3.093	.980	.921
1.022	1.001	.333	3.166	.988	.949
1.078	1.001	.325	3.225	.995	.973
1.131	1.001	.321	3.259	.998	.986
1.189	1.002	.319	3.273	1.000	.992
1.250	1.002	.318	3.282	1.000	.996

DEL = .5809	DELU = .0942	DEL* = .2416 CM
THETA = .03972	H = 6.081	UE = 660.3 M/SEC
RHOE = .1730 KG/M**3		RUN = 399

MACH = 3.00  
 ALPHA = 2.10  
 RPM = 0.

P0 = 298.2 KPA  
 Z/D = 5.67  
 PW = 5.00 KPA

T0 = 317.0 K  
 PHI = 170.  
 REL = 6982579.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.012	.950	.848	.777	.387	.371
.025	.957	.805	.972	.472	.391
.038	.963	.760	1.155	.545	.414
.064	.970	.708	1.360	.619	.445
.090	.973	.677	1.477	.658	.465
.119	.975	.651	1.578	.689	.484
.145	.977	.630	1.660	.713	.500
.174	.979	.612	1.732	.733	.515
.231	.982	.579	1.867	.768	.545
.287	.984	.552	1.977	.795	.571
.346	.986	.527	2.088	.820	.598
.405	.988	.503	2.198	.843	.627
.469	.990	.480	2.305	.864	.657
.527	.991	.461	2.398	.881	.684
.594	.993	.441	2.501	.898	.715
.654	.994	.422	2.604	.915	.747
.719	.995	.403	2.709	.930	.782
.791	.997	.385	2.821	.946	.820
.860	.998	.368	2.924	.959	.857
.931	.999	.352	3.033	.973	.897
.997	1.000	.337	3.138	.985	.937
1.067	1.001	.325	3.223	.994	.970
1.137	1.002	.320	3.264	.998	.987
1.210	1.001	.318	3.280	1.000	.993
1.277	1.002	.317	3.288	1.000	.996

DEL = .6187  
 THETA = .04284  
 RHOE = .1751

DELU = .1005  
 H = 6.042  
 KG/M\*\*3

DEL\* = .2588 CM  
 UE = 659.6 M/SEC  
 RUN = 410

MACH = 3.00  
 ALPHA = 2.10  
 RPM = 20000.

P0 = 298.0 KPA  
 Z/D = 5.67  
 PW = 5.00 KPA

T0 = 317.6 K  
 PHI = 170.  
 REL = 6954776.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.030	.961	.777	1.089	.519	.406
.039	.964	.749	1.198	.561	.421
.064	.970	.701	1.385	.627	.450
.088	.973	.673	1.495	.663	.469
.119	.976	.646	1.599	.695	.489
.143	.978	.625	1.679	.718	.505
.171	.979	.609	1.744	.736	.519
.228	.982	.576	1.878	.771	.548
.286	.984	.549	1.992	.798	.575
.345	.986	.524	2.098	.822	.602
.407	.988	.501	2.206	.844	.631
.466	.990	.479	2.309	.864	.659
.529	.991	.458	2.410	.883	.689
.590	.992	.437	2.519	.901	.722
.648	.994	.420	2.614	.916	.752
.722	.995	.399	2.734	.934	.792
.790	.996	.381	2.843	.949	.829
.859	.997	.366	2.940	.961	.864
.925	.998	.351	3.040	.973	.901
.991	.999	.337	3.132	.984	.936
1.064	1.000	.326	3.215	.993	.969
1.135	1.000	.320	3.257	.997	.985
1.207	1.001	.318	3.275	.999	.993
1.277	1.001	.317	3.283	1.000	.996

DEL = .6204  
 THETA = .04224  
 RHOE = .1749

DELU = .0997  
 H = 6.048  
 KG/M\*\*3

DEL\* = .2555 CM  
 UE = 660.2 M/SEC  
 RUN = 411

MACH = 3.00 ALPHA = 2.10 RPM = 0.				P0 = 298.5 KPA Z/D = 5.67 PW = 5.01 KPA				T0 = 312.2 K PHI = 180. REL = 7165754.				MACH = 3.00 ALPHA = 2.10 RPM = 20000.				P0 = 298.4 KPA Z/D = 5.67 PW = 5.00 KPA				T0 = 312.6 K PHI = 180. REL = 7123251.			
Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
0.000	.918	.918	0.000	0.000	.345	0.000	.918	.918	0.000	0.000	.343	0.000	.918	.918	0.000	0.000	.343	0.000	.918	.918	0.000	0.000	.343
0.012	.953	.836	.837	.415	.379	0.000	.918	.918	0.000	0.000	.343	0.000	.918	.918	0.000	0.000	.343	0.000	.918	.918	0.000	0.000	.343
.023	.959	.789	1.038	.500	.401	.039	.966	.966	.039	.966	.428	.039	.966	.966	.039	.966	.428	.039	.966	.966	.039	.966	.428
.035	.964	.755	1.177	.554	.419	.065	.970	.970	.065	.970	.451	.065	.970	.970	.065	.970	.451	.065	.970	.970	.065	.970	.451
.050	.969	.721	1.309	.602	.439	.088	.973	.973	.088	.973	.470	.088	.973	.973	.088	.973	.470	.088	.973	.973	.088	.973	.470
.067	.971	.701	1.388	.630	.452	.112	.975	.975	.112	.975	.485	.112	.975	.975	.112	.975	.485	.112	.975	.975	.112	.975	.485
.092	.974	.673	1.494	.664	.470	.138	.977	.977	.138	.977	.500	.138	.977	.977	.138	.977	.500	.138	.977	.977	.138	.977	.500
.111	.976	.655	1.567	.687	.484	.164	.979	.979	.164	.979	.514	.164	.979	.979	.164	.979	.514	.164	.979	.979	.164	.979	.514
.141	.978	.632	1.653	.712	.501	.191	.980	.980	.191	.980	.528	.191	.980	.980	.191	.980	.528	.191	.980	.980	.191	.980	.528
.168	.980	.613	1.730	.734	.517	.216	.981	.981	.216	.981	.541	.216	.981	.981	.216	.981	.541	.216	.981	.981	.216	.981	.541
.193	.981	.597	1.793	.751	.530	.246	.982	.982	.246	.982	.554	.246	.982	.982	.246	.982	.554	.246	.982	.982	.246	.982	.554
.221	.982	.582	1.854	.766	.544	.267	.983	.983	.267	.983	.564	.267	.983	.983	.267	.983	.564	.267	.983	.983	.267	.983	.564
.248	.983	.569	1.909	.780	.557	.294	.984	.984	.294	.984	.576	.294	.984	.984	.294	.984	.576	.294	.984	.984	.294	.984	.576
.274	.984	.556	1.962	.793	.569	.326	.985	.985	.326	.985	.590	.326	.985	.985	.326	.985	.590	.326	.985	.985	.326	.985	.590
.303	.986	.544	2.014	.805	.582	.354	.986	.986	.354	.986	.601	.354	.986	.986	.354	.986	.601	.354	.986	.986	.354	.986	.601
.333	.986	.533	2.063	.816	.594	.380	.987	.987	.380	.987	.615	.380	.987	.987	.380	.987	.615	.380	.987	.987	.380	.987	.615
.358	.987	.522	2.110	.826	.606	.408	.988	.988	.408	.988	.629	.408	.988	.988	.408	.988	.629	.408	.988	.988	.408	.988	.629
.386	.988	.513	2.150	.834	.617	.434	.989	.989	.434	.989	.641	.434	.989	.989	.434	.989	.641	.434	.989	.989	.434	.989	.641
.416	.989	.505	2.186	.842	.627	.464	.990	.990	.464	.990	.652	.464	.990	.990	.464	.990	.652	.464	.990	.990	.464	.990	.652
.446	.989	.495	2.236	.852	.640	.497	.991	.991	.497	.991	.677	.497	.991	.991	.497	.991	.677	.497	.991	.991	.497	.991	.677
.474	.990	.485	2.282	.861	.653	.524	.992	.992	.524	.992	.690	.524	.992	.992	.524	.992	.690	.524	.992	.992	.524	.992	.690
.503	.991	.475	2.329	.870	.666	.554	.993	.993	.554	.993	.708	.554	.993	.993	.554	.993	.708	.554	.993	.993	.554	.993	.708
.537	.992	.466	2.376	.877	.675	.584	.994	.994	.584	.994	.723	.584	.994	.994	.584	.994	.723	.584	.994	.994	.584	.994	.723
.567	.994	.456	2.425	.887	.695	.614	.995	.995	.614	.995	.740	.614	.995	.995	.614	.995	.740	.614	.995	.995	.614	.995	.740
.597	.994	.446	2.476	.896	.710	.646	.995	.995	.646	.995	.755	.646	.995	.995	.646	.995	.755	.646	.995	.995	.646	.995	.755
.629	.995	.436	2.528	.904	.726	.679	.996	.996	.679	.996	.773	.679	.996	.996	.679	.996	.773	.679	.996	.996	.679	.996	.773
.687	.995	.418	2.629	.920	.758	.709	.996	.996	.709	.996	.788	.709	.996	.996	.709	.996	.788	.709	.996	.996	.709	.996	.788
.720	.996	.408	2.683	.928	.776	.741	.997	.997	.741	.997	.801	.741	.997	.997	.741	.997	.801	.741	.997	.997	.741	.997	.801
.757	.997	.399	2.739	.936	.795	.772	.997	.997	.772	.997	.811	.772	.997	.997	.772	.997	.811	.772	.997	.997	.772	.997	.811
.823	.998	.380	2.853	.952	.834	.836	.998	.998	.836	.998	.826	.836	.998	.998	.836	.998	.826	.836	.998	.998	.836	.998	.826
.851	.999	.373	2.899	.958	.851	.868	.998	.998	.868	.998	.849	.868	.998	.998	.868	.998	.849	.868	.998	.998	.868	.998	.849
.884	.999	.364	2.953	.965	.870	.900	.999	.999	.900	.999	.866	.900	.999	.999	.900	.999	.866	.900	.999	.999	.900	.999	.866
.956	1.001	.348	3.061	.978	.911	.971	.999	.999	.971	.999	.895	.971	.999	.999	.971	.999	.895	.971	.999	.999	.971	.999	.895
.990	1.001	.341	3.112	.984	.930	1.002	1.000	1.000	1.039	.999	.942	1.002	1.000	1.000	1.039	.999	.942	1.002	1.000	1.000	1.039	.999	.942
1.020	1.001	.335	3.152	.988	.945	1.000	1.000	1.000	1.065	.999	.960	1.000	1.000	1.000	1.065	.999	.960	1.000	1.000	1.000	1.065	.999	.960
1.091	1.002	.325	3.230	.996	.977	1.000	1.000	1.000	1.135	.999	.984	1.000	1.000	1.000	1.135	.999	.984	1.000	1.000	1.000	1.135	.999	.984
1.157	1.003	.321	3.262	1.000	.989	1.000	1.000	1.000	1.205	.999	.990	1.000	1.000	1.000	1.205	.999	.990	1.000	1.000	1.000	1.205	.999	.990
1.230	1.003	.319	3.276	1.001	.995	1.000	1.000	1.000	1.274	.999	.993	1.000	1.000	1.000	1.274	.999	.993	1.000	1.000	1.000	1.274	.999	.993

DEL = .6253 THETA = .04362 RHOE = .1784				DEL = .6379 THETA = .04376 RHOE = .1788				DEL = .6379 THETA = .04376 RHOE = .1788				DEL = .6379 THETA = .04376 RHOE = .1788				DEL = .6379 THETA = .04376 RHOE = .1788			
DEL	THETA	RHOE	DEL	THETA	RHOE	DEL	THETA	RHOE	DEL	THETA	RHOE	DEL	THETA	RHOE	DEL	THETA	RHOE		
.6253	.04362	.1784	.6379	.04376	.1788	.6379	.04376	.1788	.6379	.04376	.1788	.6379	.04376	.1788	.6379	.04376	.1788		
UE = 6.019	H = 6.019	KG/M**3	UE = 6.019	H = 6.019	KG/M**3	UE = 6.019	H = 6.019	KG/M**3	UE = 6.019	H = 6.019	KG/M**3	UE = 6.019	H = 6.019	KG/M**3	UE = 6.019	H = 6.019	KG/M**3		
RUN = 336			RUN = 336			RUN = 336			RUN = 336			RUN = 336			RUN = 336				



MACH = 3.00	P0 = 298.3 KPA	T0 = 317.9 K	MACH = 3.00	P0 = 298.5 KPA	T0 = 318.3 K
ALPHA= 2.10	Z/D= 5.67	PHI= 190.	ALPHA= 2.10	Z/D= 5.67	PHI= 190.
RPM= 0.	PW = 5.00 KPA	REL=6952031.	RPM= 20000.	PW = 5.00 KPA	REL=6931590.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.012	.951	.844	.796	.506	.402
.025	.959	.792	1.028	.550	.417
.038	.965	.746	1.210	.618	.446
.064	.970	.702	1.381	.656	.465
.092	.973	.672	1.497	.686	.483
.118	.976	.646	1.598	.708	.498
.147	.978	.627	1.674	.744	.525
.201	.981	.593	1.809	.777	.554
.257	.983	.565	1.922	.802	.580
.315	.985	.541	2.029	.825	.606
.373	.987	.517	2.132	.846	.633
.437	.989	.493	2.242	.866	.662
.496	.990	.472	2.343	.883	.691
.562	.992	.450	2.452	.901	.723
.623	.993	.431	2.555	.919	.759
.686	.995	.411	2.663	.935	.795
.753	.996	.391	2.780	.950	.834
.825	.998	.373	2.896	.964	.872
.892	.999	.357	2.998	.976	.910
.962	1.000	.343	3.095	.986	.947
1.031	1.000	.331	3.180	.994	.974
1.098	1.001	.323	3.240	.997	.987
1.167	1.001	.319	3.267	.998	.993
1.238	1.001	.318	3.281	.998	.993

DEL = .6227	DELU= .1000	DEL*= .2587 CM
THETA= .04288	H = 6.032	UE = 660.7 M/SEC
RHOE= .1748	KG/M**3	RUN = 400

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.030	.960	.785	1.057	.506	.402
.038	.963	.756	1.171	.550	.417
.064	.969	.708	1.359	.618	.446
.090	.972	.678	1.474	.656	.465
.117	.975	.653	1.571	.686	.483
.142	.977	.633	1.646	.708	.498
.190	.979	.601	1.775	.744	.525
.252	.982	.569	1.905	.777	.554
.309	.984	.544	2.012	.802	.580
.367	.986	.520	2.115	.825	.606
.429	.988	.498	2.217	.846	.633
.488	.990	.476	2.322	.866	.662
.547	.991	.457	2.419	.883	.691
.612	.993	.436	2.525	.901	.723
.674	.994	.416	2.636	.919	.759
.739	.995	.397	2.746	.935	.795
.807	.996	.378	2.859	.950	.834
.875	.997	.362	2.964	.964	.872
.941	.998	.346	3.066	.976	.910
1.010	.999	.333	3.163	.986	.947
1.075	1.000	.324	3.231	.994	.974
1.145	1.000	.320	3.263	.997	.987
1.216	1.000	.318	3.277	.998	.993

DEL = .6347	DELU= .1050	DEL*= .2659 CM
THETA= .04388	H = 6.060	UE = 661.5 M/SEC
RHOE= .1749	KG/M**3	RUN = 401

MACH = 3.00	P0 = 298.4 KPA	T0 = 315.6 K	MACH = 3.00	P0 = 298.3 KPA	T0 = 316.3 K
ALPHA= 2.10	Z/D= 5.67	PHI= 210.	ALPHA= 2.10	Z/D= 5.67	PHI= 210.
RPM= 0.	PW = 4.96 KPA	REL=7030480.	RPM= 20000.	PW = 4.96 KPA	REL=7000971.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.345
.013	.954	.825	.885	.591	.434
.028	.961	.781	1.074	.642	.459
.041	.966	.740	1.237	.674	.477
.070	.971	.694	1.412	.702	.495
.095	.974	.669	1.512	.723	.510
.128	.977	.641	1.619	.758	.538
.157	.978	.620	1.694	.786	.565
.213	.982	.585	1.844	.811	.591
.276	.984	.553	1.976	.835	.620
.336	.987	.526	2.091	.857	.650
.400	.989	.502	2.204	.877	.681
.464	.990	.480	2.305	.896	.714
.529	.992	.460	2.403	.916	.752
.598	.993	.440	2.507	.932	.787
.668	.995	.420	2.618	.949	.830
.736	.996	.401	2.721	.963	.870
.808	.997	.382	2.838	.977	.912
.878	.998	.365	2.945	.989	.954
.954	1.000	.348	3.058	.996	.982
1.025	1.000	.333	3.164	.999	.992
1.100	1.001	.323	3.238	1.000	.997
1.178	1.001	.320	3.263		
1.251	1.002	.319	3.272		

DEL = .5762	DELU= .0914	DEL*= .2375 CM	DEL*= .2418 CM
THETA= .03983	H = 5.963	UE = 657.2 M/SEC	UE = 658.4 M/SEC
RHOE= .1749	KG/M**3	RUN = 353	RUN = 354

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.345
.013	.954	.825	.885	.591	.434
.028	.961	.781	1.074	.642	.459
.041	.966	.740	1.237	.674	.477
.070	.971	.694	1.412	.702	.495
.095	.974	.669	1.512	.723	.510
.128	.977	.641	1.619	.758	.538
.157	.978	.620	1.694	.786	.565
.213	.982	.585	1.844	.811	.591
.276	.984	.553	1.976	.835	.620
.336	.987	.526	2.091	.857	.650
.400	.989	.502	2.204	.877	.681
.464	.990	.480	2.305	.896	.714
.529	.992	.460	2.403	.916	.752
.598	.993	.440	2.507	.932	.787
.668	.995	.420	2.618	.949	.830
.736	.996	.401	2.721	.963	.870
.808	.997	.382	2.838	.977	.912
.878	.998	.365	2.945	.989	.954
.954	1.000	.348	3.058	.996	.982
1.025	1.000	.333	3.164	.999	.992
1.100	1.001	.323	3.238	1.000	.997
1.178	1.001	.320	3.263		
1.251	1.002	.319	3.272		

DEL = .5785	DELU= .0954	DEL*= .2418 CM
THETA= .03988	H = 6.063	UE = 658.4 M/SEC
RHOE= .1748	KG/M**3	RUN = 354



MACH = 3.00	P0 = 298.0 KPA	T0 = 319.5 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 319.6 K
ALPHA = 2.10	Z/D = 5.67	PH1 = 300.	ALPHA = 2.10	Z/D = 5.67	PH1 = 300.
RPM = 0.	PW = 4.66 KPA	REL = 6889393.	RPM = 20000.	PW = 4.66 KPA	REL = 6886466.

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.333
.018	.956	.803	.975	.469	.380
.026	.959	.785	1.053	.500	.389
.047	.967	.719	1.313	.598	.424
.069	.973	.667	1.513	.663	.458
.118	.978	.612	1.727	.725	.499
.148	.980	.581	1.852	.758	.525
.198	.983	.552	1.977	.788	.554
.239	.985	.531	2.065	.808	.575
.283	.986	.510	2.160	.828	.599
.327	.988	.489	2.257	.847	.624
.372	.989	.473	2.336	.862	.646
.417	.990	.458	2.409	.875	.667
.457	.991	.445	2.474	.886	.685
.503	.992	.434	2.538	.897	.704
.553	.993	.420	2.612	.908	.728
.597	.993	.408	2.679	.918	.749
.640	.994	.399	2.733	.926	.766
.689	.995	.389	2.792	.934	.786
.738	.996	.377	2.862	.943	.809
.788	.996	.367	2.930	.952	.833
.837	.997	.356	3.000	.961	.858
.896	.998	.346	3.071	.969	.884
.931	.998	.337	3.135	.976	.907
.988	.999	.327	3.206	.984	.934
1.045	.999	.319	3.269	.990	.959
1.088	1.000	.312	3.318	.995	.978
1.140	1.000	.309	3.347	.998	.990
1.187	1.000	.307	3.358	.999	.994
1.243	1.000	.306	3.367	1.000	.998
1.289	1.000	.306	3.370	1.000	.999

DEL = .4121	DELTA = .02602	DELTA = .02588	DEL = .4123	DELTA = .02588	DEL = .4123
THETA = .1673	THETA = .1673	THETA = .1674	THETA = .1674	THETA = .1674	THETA = .1674
RHDE = .1673	RHDE = .1673	RHDE = .1674	RHDE = .1674	RHDE = .1674	RHDE = .1674
DELU = .0584	DELU = .0584	DELU = .0614	DELU = .0614	DELU = .0614	DELU = .0614
H = 6.136	H = 6.136	H = 6.288	H = 6.288	H = 6.288	H = 6.288
KG/M**3	KG/M**3	KG/M**3	KG/M**3	KG/M**3	KG/M**3

DEL* = .1597 CM	DEL* = .1627 CM
UE = 667.6 M/SEC	UE = 667.9 M/SEC
RUN = 426	RUN = 427

MACH = 3.00	P0 = 298.2 KPA	T0 = 315.6 K	MACH = 3.00	P0 = 298.3 KPA	T0 = 316.2 K
ALPHA= 2.10	Z/D= 5.67	PHI= 330.	ALPHA= 2.10	Z/D= 5.67	PHI= 330.
RPM= 0.	PW = 4.78 KPA	REL=7041803.	RPM= 20000.	PW = 4.78 KPA	REL=7005663.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.338
.020	.956	.805	.971	.604	.432
.039	.963	.753	1.181	.663	.463
.058	.970	.696	1.402	.695	.482
.081	.974	.653	1.567	.747	.521
.105	.978	.624	1.682	.779	.550
.127	.979	.602	1.771	.803	.574
.148	.981	.582	1.853	.822	.596
.196	.983	.552	1.975	.839	.617
.242	.985	.533	2.059	.856	.641
.286	.987	.515	2.139	.871	.663
.334	.988	.497	2.225	.883	.684
.379	.990	.479	2.308	.897	.709
.431	.991	.462	2.390	.910	.734
.480	.992	.448	2.465	.921	.758
.520	.993	.433	2.540	.931	.779
.576	.994	.416	2.635	.939	.800
.626	.995	.402	2.719	.949	.826
.676	.996	.390	2.789	.958	.850
.727	.997	.379	2.856	.966	.874
.782	.998	.370	2.913	.975	.903
.835	.998	.361	2.967	.981	.926
.886	.998	.352	3.028	.988	.951
.939	1.000	.342	3.102	.994	.973
.993	1.000	.333	3.167	.998	.987
1.046	1.001	.324	3.232	.999	.993
1.104	1.002	.318	3.278	1.000	.997
1.157	1.001	.314	3.306		
1.213	1.002	.312	3.323		
1.263	1.002	.311	3.330		

DEL = .3726	DELU= .0527	DEL*= .1431 CM
THETA= .02337	H = 6.123	UE = 660.4 M/SEC
RHOE= .1715 KG/M**3		RUN = 386

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.338
.020	.956	.805	.971	.604	.432
.039	.963	.753	1.181	.663	.463
.058	.970	.696	1.402	.695	.482
.081	.974	.653	1.567	.747	.521
.105	.978	.624	1.682	.779	.550
.127	.979	.602	1.771	.803	.574
.148	.981	.582	1.853	.822	.596
.196	.983	.552	1.975	.839	.617
.242	.985	.533	2.059	.856	.641
.286	.987	.515	2.139	.871	.663
.334	.988	.497	2.225	.883	.684
.379	.990	.479	2.308	.897	.709
.431	.991	.462	2.390	.910	.734
.480	.992	.448	2.465	.921	.758
.520	.993	.433	2.540	.931	.779
.576	.994	.416	2.635	.939	.800
.626	.995	.402	2.719	.949	.826
.676	.996	.390	2.789	.958	.850
.727	.997	.379	2.856	.966	.874
.782	.998	.370	2.913	.975	.903
.835	.998	.361	2.967	.981	.926
.886	.998	.352	3.028	.988	.951
.939	1.000	.342	3.102	.994	.973
.993	1.000	.333	3.167	.998	.987
1.046	1.001	.324	3.232	.999	.993
1.104	1.002	.318	3.278	1.000	.997
1.157	1.001	.314	3.306		
1.213	1.002	.312	3.323		
1.263	1.002	.311	3.330		

DEL = .3791	DELU= .0575	DEL*= .1489 CM
THETA= .02379	H = 6.258	UE = 661.6 M/SEC
RHOE= .1711 KG/M**3		RUN = 387



MACH = 3.00	P0 = 298.6 KPA	T0 = 313.9 K	MACH = 3.00	P0 = 298.4 KPA	T0 = 315.5 K
ALPHA = 4.20	Z/O = 5.67	PHI = 0.	ALPHA = 4.20	Z/O = 5.67	PHI = 0.
RPM = 0.	PW = 4.97 KPA	REL = 7108355.	RPM = 20000.	PW = 4.97 KPA	REL = 7040174.

Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.345
.028	.964	.760	1.158	.715	.503
.056	.971	.697	1.404	.602	.526
.082	.976	.648	1.590	.576	.550
.101	.979	.619	1.705	.556	.570
.165	.984	.567	1.916	.539	.588
.226	.986	.530	2.075	.524	.605
.287	.989	.506	2.185	.501	.632
.351	.990	.483	2.291	.482	.658
.412	.992	.464	2.386	.463	.685
.479	.993	.444	2.485	.443	.715
.536	.994	.430	2.563	.428	.740
.601	.996	.413	2.658	.412	.770
.662	.997	.396	2.755	.399	.795
.727	.998	.382	2.839	.384	.826
.794	.999	.372	2.902	.372	.852
.862	.999	.364	2.955	.360	.880
.931	1.000	.352	3.033	.349	.910
.994	1.001	.340	3.115	.339	.936
1.068	1.002	.331	3.187	.330	.962
1.125	1.002	.325	3.226	.326	.974
1.207	1.003	.321	3.258	.321	.989
1.281	1.003	.319	3.272	.319	.995
1.346	1.003	.319	3.278	.318	1.000
1.504	1.003	.318	3.280	.318	1.001

DEL = .2708	DELU = .0364	OEL* = .0996 CM	DEL* = .0991 CM
THETA = .01664	H = 5.989	UE = 655.1 M/SEC	UE = 657.2 M/SEC
RHOE = .1769 KG/M**3		RUN = 349	RUN = 350

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.345
.084	.978	.630	1.662	.715	.503
.112	.980	.602	1.771	.602	.526
.143	.982	.576	1.878	.576	.550
.170	.984	.556	1.963	.556	.570
.200	.985	.539	2.035	.539	.588
.229	.987	.524	2.100	.524	.605
.290	.988	.501	2.205	.501	.632
.348	.990	.482	2.295	.482	.658
.408	.991	.463	2.388	.463	.685
.479	.993	.443	2.490	.443	.715
.538	.994	.428	2.569	.428	.740
.603	.995	.412	2.662	.412	.770
.663	.996	.399	2.736	.399	.795
.736	.997	.384	2.825	.384	.826
.797	.998	.372	2.900	.372	.852
.867	.999	.360	2.976	.360	.880
.934	1.000	.349	3.055	.349	.910
.996	1.000	.339	3.124	.339	.936
1.073	1.001	.330	3.189	.330	.962
1.123	1.001	.326	3.221	.326	.974
1.214	1.001	.321	3.258	.321	.989
1.283	1.002	.319	3.273	.319	.995
1.358	1.002	.318	3.278	.318	1.000
					1.001

OEL = .2698	OELU = .0382	THETA = .01605	DEL* = .0991 CM
RHOE = .1758 KG/M**3	H = 6.178	UE = 657.2 M/SEC	UE = 657.2 M/SEC
		RUN = 350	RUN = 350

MACH = 3.00	P0 = 298.9 KPA	T0 = 307.9 K	MACH = 3.00	P0 = 299.0 KPA	T0 = 308.8 K
ALPHA= 4.20	Z/D= 5.67	PHI= 30.	ALPHA= 4.20	Z/D= 5.67	PHI= 30.
RPM= 0.	PW = 4.77 KPA	REL=7309357.	RPM= 20000.	PW = 4.78 KPA	REL=7260397.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.340
.026	.962	.767	1.128	.534	.406
.052	.970	.704	1.376	.623	.443
.068	.974	.668	1.512	.668	.466
.104	.978	.623	1.689	.720	.501
.123	.980	.598	1.787	.746	.521
.153	.983	.571	1.898	.774	.546
.267	.986	.537	2.044	.809	.581
.325	.988	.509	2.168	.835	.613
.488	.989	.488	2.268	.855	.639
.451	.991	.469	2.359	.872	.665
.436	.992	.451	2.448	.888	.691
.496	.994	.436	2.531	.902	.716
.559	.995	.421	2.613	.915	.742
.617	.996	.406	2.697	.927	.769
.681	.997	.391	2.782	.939	.798
.736	.998	.379	2.859	.949	.824
.794	.999	.366	2.942	.960	.854
.862	1.000	.353	3.023	.970	.883
.929	1.000	.345	3.084	.977	.906
.997	1.001	.335	3.153	.985	.932
1.057	1.002	.327	3.213	.991	.955
1.123	1.002	.320	3.265	.996	.976
1.192	1.003	.316	3.295	.999	.988
1.261	1.003	.314	3.309	1.001	.994
1.330	1.003	.314	3.314	1.001	.996

DEL = .2928	DELU= .0394	DEL*= .1086 CM
THETA= .01785	H = 6.085	UE = 651.1 M/SEC
RHOE= .1752	KG/M**3	RUN = 365

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.340
.073	.974	.664	1.528	.672	.470
.096	.976	.636	1.636	.704	.518
.124	.980	.602	1.769	.741	.539
.153	.981	.579	1.866	.766	.580
.213	.985	.538	2.038	.806	.607
.269	.987	.514	2.146	.830	.636
.326	.988	.491	2.253	.851	.661
.382	.990	.472	2.342	.868	.690
.440	.991	.452	2.443	.886	.716
.502	.993	.436	2.527	.900	.743
.563	.994	.420	2.613	.914	.770
.618	.995	.405	2.698	.926	.801
.686	.996	.389	2.791	.939	.825
.742	.997	.378	2.859	.948	.850
.802	.998	.367	2.931	.958	.880
.869	.998	.355	3.012	.967	.911
.938	.999	.343	3.095	.977	.937
.997	1.000	.333	3.164	.985	.960
1.064	1.000	.325	3.221	.991	.977
1.126	1.000	.319	3.264	.995	.989
1.201	1.001	.316	3.295	.998	.995
1.265	1.001	.314	3.309	1.000	.997
1.341	1.001	.313	3.315	1.000	.997

DEL = .2904	DELU= .0422	DEL*= .1097 CM
THETA= .01757	H = 6.244	UE = 652.8 M/SEC
RHOE= .1744	KG/M**3	RUN = 366

MACH = 3.00	P0 = 297.8 KPA	T0 = 310.8 K	MACH = 3.00	TT/T0	Y/DEL	T/T0	M	U/UE	RHO/RHOE
ALPHA= 4.20	Z/D= 5.67	PHI= 60.	ALPHA= 4.20	.916	.000	.916	.000	.000	.328
RPM= 0.	PW = 4.30 KPA	REL=7165446.	RPM= 20000.	.956	.024	.798	.996	.476	.376
				.961	.038	.764	1.136	.531	.393
				.965	.050	.732	1.263	.578	.410
				.972	.074	.672	1.496	.656	.447
				.975	.095	.639	1.624	.695	.470
				.978	.127	.605	1.755	.731	.496
				.981	.152	.579	1.863	.759	.519
				.984	.200	.545	2.007	.793	.551
				.986	.259	.518	2.124	.818	.579
				.987	.307	.498	2.218	.837	.603
				.989	.362	.478	2.314	.856	.629
				.990	.415	.459	2.405	.872	.654
				.992	.475	.440	2.505	.889	.683
				.993	.525	.423	2.594	.903	.709
				.994	.575	.410	2.671	.915	.733
				.995	.640	.394	2.760	.927	.762
				.996	.692	.379	2.851	.939	.792
				.997	.751	.366	2.935	.950	.820
				.998	.818	.354	3.013	.960	.848
				.999	.875	.343	3.090	.968	.875
				.932	.932	.332	3.172	.977	.906
				1.000	.996	.322	3.241	.985	.932
				1.001	1.058	.314	3.306	.991	.957
				1.001	1.108	.310	3.341	.994	.970
				1.002	1.178	.306	3.372	.997	.983
				1.002	1.239	.304	3.387	.999	.989
				1.002	1.302	.303	3.398	1.000	.993
				1.002	1.366	.302	3.405	1.001	.996
				1.002	1.502	.301	3.409	1.001	.997

DEL = .3144	DELU= .0451	DEL*= .1233 CM
THETA= .01936	H = 6.366	UE = 660.1 M/SEC
RHOE= .1623 KG/M**3		RUN = 381

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.328
.024	.956	.798	.996	.476	.376
.038	.961	.764	1.136	.531	.393
.050	.965	.732	1.263	.578	.410
.074	.972	.672	1.496	.656	.447
.095	.975	.639	1.624	.695	.470
.127	.978	.605	1.755	.731	.496
.152	.981	.579	1.863	.759	.519
.200	.984	.545	2.007	.793	.551
.259	.986	.518	2.124	.818	.579
.307	.987	.498	2.218	.837	.603
.362	.989	.478	2.314	.856	.629
.415	.990	.459	2.405	.872	.654
.475	.992	.440	2.505	.889	.683
.525	.993	.423	2.594	.903	.709
.575	.994	.410	2.671	.915	.733
.640	.995	.394	2.760	.927	.762
.692	.996	.379	2.851	.939	.792
.751	.997	.366	2.935	.950	.820
.818	.998	.354	3.013	.960	.848
.875	.999	.343	3.090	.968	.875
.932	1.000	.332	3.172	.977	.906
.996	1.000	.322	3.241	.985	.932
1.058	1.001	.314	3.306	.991	.957
1.108	1.001	.310	3.341	.994	.970
1.178	1.002	.306	3.372	.997	.983
1.239	1.002	.304	3.387	.999	.989
1.302	1.002	.303	3.398	1.000	.993
1.366	1.002	.302	3.405	1.001	.996
1.502	1.002	.301	3.409	1.001	.997

DEL = .3261	DELU= .0482	DEL*= .1276 CM
THETA= .01974	H = 6.464	UE = 660.9 M/SEC
RHOE= .1619 KG/M**3		RUN = 382



MACH = 3.00	P0 = 298.2 KPA	T0 = 317.7 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 317.9 K
ALPHA= 4.20	Z/D= 5.67	PHI= 120.	ALPHA= 4.20	Z/D= 5.67	PHI= 120.
RPM= 0.	PW = 4.62 KPA	REL=6960772.	RPM= 2000.	PW = 4.62 KPA	REL=6935651.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHDE
.000	.917	.917	.000	.000	.342
.014	.951	.841	.808	.461	.387
.025	.955	.813	.935	.655	.463
.054	.966	.738	1.241	.723	.507
.090	.971	.695	1.407	.774	.550
.118	.974	.665	1.524	.812	.589
.150	.976	.638	1.629	.838	.621
.218	.981	.590	1.821	.862	.655
.284	.984	.551	1.983	.883	.688
.353	.986	.521	2.112	.903	.724
.425	.988	.493	2.242	.921	.761
.492	.990	.468	2.360	.937	.799
.575	.992	.444	2.484	.953	.840
.643	.994	.421	2.607	.968	.883
.711	.995	.399	2.731	.980	.923
.791	.996	.377	2.864	.991	.962
.871	.998	.358	2.986	.997	.986
.949	.999	.342	3.102	.999	.996
1.035	1.000	.326	3.215	1.000	.997
1.099	1.000	.317	3.285		
1.182	1.001	.313	3.314		
1.264	1.001	.313	3.317		

DEL = .5425	DELU= .0899	DEL*= .2283 CM
THETA= .03713	H = 6.147	UE = 662.3 M/SEC
RHDE= .1639 KG/M**3		RUN = 420

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHDE
.000	.918	.918	.000	.000	.342
.025	.956	.811	.947	.461	.387
.097	.972	.678	1.471	.655	.463
.153	.978	.619	1.702	.723	.507
.222	.982	.571	1.896	.774	.550
.293	.985	.533	2.058	.812	.589
.359	.987	.506	2.182	.838	.621
.433	.989	.479	2.306	.862	.655
.498	.991	.457	2.418	.883	.688
.584	.992	.434	2.539	.903	.724
.654	.994	.412	2.655	.921	.761
.723	.995	.393	2.768	.937	.799
.801	.996	.374	2.887	.953	.840
.886	.998	.356	3.004	.968	.883
.963	.999	.340	3.110	.980	.923
1.044	1.000	.327	3.210	.991	.962
1.116	1.000	.319	3.271	.997	.986
1.202	1.000	.316	3.295	.999	.996
1.280	1.000	.315	3.298	1.000	.997

DEL = .5335	DELU= .0832	DEL*= .2160 CM
THETA= .03599	H = 6.002	UE = 661.7 M/SEC
RHDE= .1622 KG/M**3		RUN = 421

MACH = 3.00	P0 = 298.7 KPA	T0 = 315.0 K	MACH = 3.00	P0 = 298.2 KPA	T0 = 315.9 K
ALPHA = 4.20	Z/D = 5.67	PHI = 150.	ALPHA = 4.20	Z/D = 5.67	PHI = 150.
RPM = 0.	PW = 5.02 KPA	REL = 7083480.	RPM = 20000.	PW = 5.01 KPA	REL = 7023908.

Y/DEL	Tf/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.010	.955	.815	.930	.492	.397
.029	.963	.765	1.138	.538	.427
.053	.968	.728	1.282	.592	.446
.076	.971	.702	1.382	.626	.463
.099	.973	.680	1.466	.654	.491
.143	.977	.646	1.598	.695	.491
.191	.979	.616	1.715	.728	.519
.241	.981	.591	1.816	.755	.544
.289	.983	.570	1.905	.778	.567
.341	.986	.547	2.001	.800	.590
.394	.987	.525	2.098	.822	.603
.446	.989	.504	2.193	.842	.624
.500	.990	.483	2.290	.861	.642
.555	.992	.463	2.391	.879	.670
.608	.994	.443	2.494	.897	.701
.666	.995	.423	2.599	.914	.733
.726	.997	.404	2.708	.930	.766
.780	.998	.387	2.807	.944	.800
.839	.999	.370	2.913	.958	.834
.898	1.000	.356	3.006	.969	.868
.962	1.001	.344	3.089	.979	.902
1.018	1.002	.333	3.168	.988	.935
1.077	1.002	.324	3.237	.995	.961
1.138	1.003	.319	3.273	.999	.979
1.201	1.003	.317	3.290	1.000	.989
1.260	1.004	.316	3.299	1.001	.993
				1.000	.997

DEL = .7401	DELU = .1242	DEL* = .3198 CM
THETA = .05214	H = 6.133	UE = 657.5 M/SEC
RHOE = .1777	KG/M**3	RUN = 388

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.028	.959	.793	1.022	.492	.397
.051	.966	.738	1.243	.577	.427
.077	.970	.705	1.370	.622	.446
.101	.972	.680	1.468	.654	.463
.146	.976	.641	1.616	.700	.491
.196	.979	.607	1.753	.738	.519
.249	.981	.578	1.867	.768	.544
.299	.984	.555	1.964	.791	.567
.352	.985	.533	2.059	.813	.590
.378	.987	.522	2.110	.824	.603
.459	.989	.490	2.254	.853	.642
.514	.990	.470	2.354	.872	.670
.572	.992	.450	2.456	.890	.701
.631	.993	.430	2.561	.908	.733
.687	.995	.411	2.663	.923	.766
.749	.996	.394	2.765	.938	.800
.807	.997	.378	2.862	.951	.834
.866	.998	.363	2.958	.963	.868
.927	.999	.349	3.048	.974	.902
.992	1.000	.337	3.136	.984	.935
1.051	1.000	.328	3.202	.991	.961
1.110	1.001	.322	3.249	.996	.979
1.172	1.001	.319	3.272	.998	.989
1.237	1.001	.317	3.283	.999	.993
1.301	1.001	.316	3.293	1.000	.997

DEL = .7175	DELU = .1211	DEL* = .3041 CM
THETA = .04958	H = 6.133	UE = 658.7 M/SEC
RHOE = .1763	KG/M**3	RUN = 389

MACH = 3.00	P0 = 297.9 KPA	T0 = 317.8 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 318.1 K
ALPHA= 4.20	Z/D= 5.67	PHI= 170.	ALPHA= 4.20	Z/D= 5.67	PHI= 170.
RPM= 0.	PW = 5.14 KPA	REL=6938631.	RPM= 20000.	PW = 5.14 KPA	REL=6929590.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.009	.950	.849	.774	.499	.401
.024	.961	.778	1.084	.585	.432
.043	.967	.727	1.285	.622	.448
.063	.970	.700	1.389	.653	.464
.082	.973	.678	1.475	.698	.492
.123	.976	.641	1.617	.732	.516
.162	.979	.612	1.729	.757	.537
.203	.981	.589	1.823	.779	.557
.247	.983	.568	1.910	.800	.579
.290	.984	.549	1.992	.818	.599
.334	.986	.529	2.079	.837	.622
.381	.987	.510	2.163	.853	.644
.426	.989	.493	2.243	.869	.668
.471	.990	.476	2.324	.884	.693
.521	.991	.459	2.408	.898	.718
.570	.992	.443	2.491	.912	.744
.619	.993	.427	2.573	.925	.771
.668	.994	.413	2.655	.936	.797
.719	.995	.398	2.741	.947	.827
.770	.996	.384	2.820	.958	.854
.821	.997	.372	2.896	.967	.881
.872	.998	.361	2.971	.975	.909
.921	.998	.351	3.038	.984	.938
.973	.999	.341	3.109	.991	.963
1.026	.999	.331	3.179	.996	.984
1.081	1.000	.322	3.242	.999	.994
1.131	1.000	.318	3.273	1.000	.998
1.183	1.000	.317	3.287		

DEL = .8552	DELU= .1340	DEL*= .3494 CM
THETA= .05869	H = 5.954	UE = 660.7 M/SEC
RHOE= .1799 KG/M**3		RUN = 412

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.025	.959	.789	1.038	.499	.401
.045	.967	.733	1.264	.585	.432
.062	.970	.705	1.369	.622	.448
.085	.972	.681	1.464	.653	.464
.125	.976	.643	1.610	.698	.492
.166	.979	.613	1.727	.732	.516
.208	.981	.589	1.823	.757	.537
.252	.983	.567	1.913	.779	.557
.297	.984	.546	2.002	.800	.579
.340	.986	.528	2.082	.818	.599
.389	.987	.509	2.169	.837	.622
.434	.988	.491	2.252	.853	.644
.482	.990	.473	2.335	.869	.668
.531	.991	.456	2.420	.884	.693
.581	.992	.441	2.502	.898	.718
.631	.993	.425	2.586	.912	.744
.682	.995	.410	2.669	.925	.771
.730	.995	.397	2.747	.936	.797
.784	.996	.383	2.832	.947	.827
.836	.997	.370	2.910	.958	.854
.887	.998	.359	2.984	.967	.881
.941	.998	.348	3.057	.975	.909
.993	.999	.337	3.132	.984	.938
1.046	1.000	.328	3.197	.991	.963
1.100	1.000	.321	3.250	.996	.984
1.152	1.000	.318	3.275	.999	.994
1.205	1.000	.317	3.284	1.000	.998

DEL = .8395	DELU= .1350	DEL*= .3456 CM
THETA= .05744	H = 6.016	UE = 660.8 M/SEC
RHOE= .1795 KG/M**3		RUN = 413

MACH = 3.00	P0 = 297.3 KPA	T0 = 312.6 K	MACH = 3.00	P0 = 297.5 KPA	T0 = 313.7 K
ALPHA = 4.20	Z/D = 5.67	PHI = 180.	ALPHA = 4.20	Z/D = 5.67	PHI = 180.
RPM = 0.	PW = 5.15 KPA	REL = 7109828.	RPM = 20000.	PW = 5.14 KPA	REL = 7086374.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.009	.959	.794	1.017	.490	.397
.027	.965	.742	1.228	.572	.425
.038	.968	.724	1.299	.597	.436
.057	.970	.698	1.397	.631	.452
.078	.973	.676	1.480	.658	.467
.095	.974	.660	1.545	.678	.478
.135	.977	.627	1.670	.715	.503
.176	.980	.603	1.766	.742	.523
.216	.981	.581	1.857	.765	.543
.261	.983	.560	1.942	.786	.563
.301	.984	.542	2.022	.805	.583
.344	.986	.522	2.106	.823	.604
.389	.988	.504	2.190	.841	.626
.436	.989	.487	2.271	.857	.648
.485	.990	.470	2.355	.872	.672
.533	.991	.452	2.440	.887	.698
.582	.992	.436	2.524	.901	.723
.630	.993	.421	2.607	.915	.750
.679	.994	.407	2.685	.926	.775
.731	.995	.393	2.767	.938	.803
.784	.996	.380	2.850	.949	.831
.832	.997	.368	2.924	.959	.858
.883	.997	.357	2.996	.968	.884
.932	.999	.347	3.062	.975	.909
.989	.999	.337	3.134	.983	.936
1.040	1.000	.329	3.195	.990	.961
1.095	1.000	.322	3.247	.996	.981
1.152	1.000	.318	3.275	.998	.993
1.200	1.000	.317	3.284	.999	.996
1.281	1.000	.316	3.290	1.000	.999
1.358	1.000	.315	3.295	1.000	1.000

DEL = .8356	DELU = .1273	DEL* = .3375 CM
THETA = .05716	H = 5.905	UE = 655.4 M/SEC
RHOE = .1826 KG/M**3		RUN = 340

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.009	.959	.794	1.017	.490	.397
.027	.965	.742	1.228	.572	.425
.038	.968	.724	1.299	.597	.436
.057	.970	.698	1.397	.631	.452
.078	.973	.676	1.480	.658	.467
.095	.974	.660	1.545	.678	.478
.135	.977	.627	1.670	.715	.503
.176	.980	.603	1.766	.742	.523
.216	.981	.581	1.857	.765	.543
.261	.983	.560	1.942	.786	.563
.301	.984	.542	2.022	.805	.583
.344	.986	.522	2.106	.823	.604
.389	.988	.504	2.190	.841	.626
.436	.989	.487	2.271	.857	.648
.485	.990	.470	2.355	.872	.672
.533	.991	.452	2.440	.887	.698
.582	.992	.436	2.524	.901	.723
.630	.993	.421	2.607	.915	.750
.679	.994	.407	2.685	.926	.775
.731	.995	.393	2.767	.938	.803
.784	.996	.380	2.850	.949	.831
.832	.997	.368	2.924	.959	.858
.883	.997	.357	2.996	.968	.884
.932	.999	.347	3.062	.975	.909
.989	.999	.337	3.134	.983	.936
1.040	1.000	.329	3.195	.990	.961
1.095	1.000	.322	3.247	.996	.981
1.152	1.000	.318	3.275	.998	.993
1.200	1.000	.317	3.284	.999	.996
1.281	1.000	.316	3.290	1.000	.999
1.358	1.000	.315	3.295	1.000	1.000

DEL = .8343	DELU = .1314	DEL* = .3390 CM
THETA = .05613	H = 6.039	UE = 656.6 M/SEC
RHOE = .1819 KG/M**3		RUN = 341

MACH = 3.00	P0 = 298.1 KPA	T0 = 318.6 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 318.7 K
ALPHA= 4.20	Z/D= 5.67	PHI= 190.	ALPHA= 4.20	Z/D= 5.67	PHI= 190.
RPM= 0.	PW = 5.15 KPA	REL=6928448.	RPM= 20000.	PW = 5.14 KPA	REL=6906607.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.009	.950	.959	.753	.491	.398
.015	.954	.961	.879	.515	.406
.027	.961	.966	1.085	.584	.431
.045	.967	.970	1.255	.625	.450
.064	.970	.974	1.368	.676	.478
.086	.972	.977	1.454	.713	.502
.105	.974	.979	1.525	.742	.524
.146	.977	.981	1.650	.765	.544
.188	.979	.985	1.755	.786	.564
.232	.981	.985	1.846	.805	.584
.273	.983	.986	1.927	.824	.606
.319	.984	.987	2.013	.840	.626
.365	.986	.989	2.100	.856	.648
.412	.988	.990	2.184	.871	.672
.459	.989	.991	2.266	.886	.696
.508	.990	.992	2.358	.900	.721
.555	.991	.993	2.434	.913	.747
.606	.993	.994	2.519	.926	.774
.657	.994	.995	2.612	.938	.804
.705	.995	.996	2.697	.949	.831
.758	.996	.997	2.785	.958	.858
.810	.997	.998	2.869	.968	.885
.857	.997	.999	2.941	.976	.911
.912	.998	.999	3.019	.984	.940
.962	.999	.999	3.090	.991	.965
1.016	.999	.999	3.165	.996	.984
1.069	1.000	1.000	3.226	.999	.994
1.122	1.000	1.000	3.264	1.000	.998
1.172	1.000	1.000	3.279	1.000	.998

DEL = .8435	DELU= .1371	DEL*= .3516 CM
THETA= .05874	H = 5.986	UE = 661.4 M/SEC
RHOE= .1797 KG/M**3		RUN = 402

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.022	.959	.974	1.020	.491	.398
.026	.961	.979	1.080	.515	.406
.044	.966	.983	1.262	.584	.431
.063	.970	.987	1.378	.625	.450
.104	.974	.991	1.538	.676	.478
.144	.977	.994	1.662	.713	.502
.185	.979	.996	1.765	.742	.524
.226	.981	.998	1.856	.765	.544
.269	.983	.999	1.940	.786	.564
.312	.985	.999	2.023	.805	.584
.358	.986	.999	2.111	.824	.606
.402	.987	.999	2.186	.840	.626
.450	.989	.999	2.265	.856	.648
.497	.990	.999	2.348	.871	.672
.544	.991	.999	2.430	.886	.696
.594	.992	.999	2.513	.900	.721
.644	.993	.999	2.595	.913	.747
.692	.994	.999	2.678	.926	.774
.744	.995	.999	2.765	.938	.804
.794	.996	.999	2.844	.949	.831
.844	.997	.999	2.918	.958	.858
.893	.998	.999	2.992	.968	.885
.944	.998	.999	3.063	.976	.911
.996	.999	.999	3.139	.984	.940
1.047	.999	.999	3.200	.991	.965
1.100	1.000	.999	3.249	.996	.984
1.154	1.000	.999	3.274	.999	.994
1.199	1.000	.999	3.283	1.000	.998

DEL = .8602	DELU= .1387	DEL*= .3555 CM
THETA= .05933	H = 5.992	UE = 661.6 M/SEC
RHOE= .1792 KG/M**3		RUN = 403



MACH = 3.00	P0 = 298.0 KPA	T0 = 316.7 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 316.9 K
ALPHA = 4.20	Z/D = 5.67	PHI = 210.	ALPHA = 4.20	Z/D = 5.67	PHI = 210.
RPM = 0.	PW = 5.01 KPA	REL = 6984656.	RPM = 20000.	PW = 5.01 KPA	REL = 6968769.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.011	.951	.960	.791	.393	.404
.019	.957	.965	.957	.465	.426
.031	.961	.969	1.101	.524	.440
.054	.966	.971	1.253	.581	.453
.075	.969	.974	1.343	.613	.476
.100	.972	.977	1.440	.645	.498
.123	.974	.979	1.509	.667	.517
.147	.975	.981	1.583	.690	.537
.197	.978	.982	1.704	.725	.556
.247	.981	.985	1.810	.753	.579
.296	.983	.986	1.911	.779	.602
.349	.985	.988	2.007	.801	.627
.404	.986	.989	2.108	.824	.654
.458	.988	.991	2.202	.843	.684
.515	.990	.992	2.295	.861	.720
.569	.991	.994	2.398	.880	.754
.628	.993	.995	2.516	.900	.790
.688	.994	.996	2.625	.917	.829
.741	.995	.997	2.728	.933	.867
.806	.996	.999	2.837	.948	.908
.867	.997	.999	2.945	.962	.942
.929	.998	1.000	3.042	.973	.978
.991	.999	1.000	3.134	.984	.992
1.050	1.000	1.000	3.205	.991	.997
1.146	1.000	1.000	3.264	.997	
1.237	1.001	1.000	3.280	.999	
1.334	1.001	1.000	3.290	1.000	

DEL = .7052	DELU = .1223	DEL* = .3060 CM
THETA = .05044	H = 6.066	UE = 659.6 M/SEC
RHOE = .1771 KG/M**3		RUN = 355

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.032	.960	.978	1.075	.513	.404
.052	.965	.979	1.236	.575	.426
.075	.969	.982	1.330	.608	.440
.096	.971	.985	1.405	.634	.453
.140	.974	.986	1.538	.676	.476
.187	.977	.988	1.649	.709	.498
.234	.979	.989	1.743	.735	.517
.282	.981	.991	1.833	.759	.537
.331	.982	.992	1.918	.780	.556
.382	.985	.994	2.011	.802	.579
.437	.986	.995	2.103	.822	.602
.490	.988	.996	2.198	.842	.627
.543	.989	.997	2.296	.861	.654
.595	.991	.998	2.398	.880	.684
.655	.992	.999	2.516	.900	.720
.710	.994	.999	2.626	.917	.754
.767	.995	.999	2.734	.933	.790
.826	.996	.999	2.847	.948	.829
.881	.997	.999	2.953	.962	.867
.944	.999	.999	3.063	.975	.908
1.000	1.000	.999	3.152	.985	.942
1.087	1.000	.999	3.244	.995	.978
1.176	1.000	.999	3.277	.998	.992
1.267	1.000	.999	3.291	1.000	.997

DEL = .7402	DELU = .1364	DEL* = .3323 CM
THETA = .05387	H = 6.168	UE = 660.2 M/SEC
RHOE = .1772 KG/M**3		RUN = 356

MACH = 3.00	P0 = 298.5 KPA	T0 = 310.8 K	MACH = 3.00	P0 = 298.4 KPA	T0 = 311.2 K
ALPHA = 4.20	Z/D = 5.67	PHI = 240.	ALPHA = 4.20	Z/D = 5.67	PHI = 240.
RPM = 0.	PW = 4.62 KPA	REL = 7163534.	RPM = 20000.	PW = 4.62 KPA	REL = 7171191.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.336
.015	.951	.839	.818	.545	.407
.034	.962	.770	1.115	.752	.410
.067	.969	.713	1.340	.745	.414
.099	.972	.679	1.469	.724	.426
.130	.975	.650	1.583	.698	.442
.164	.978	.622	1.689	.660	.459
.195	.980	.599	1.784	.628	.476
.235	.982	.574	1.886	.600	.494
.302	.985	.537	2.041	.588	.511
.374	.987	.505	2.184	.575	.528
.447	.989	.475	2.327	.562	.549
.512	.991	.452	2.442	.528	.584
.594	.993	.427	2.576	.498	.620
.677	.994	.404	2.704	.471	.656
.750	.996	.383	2.827	.446	.692
.833	.997	.365	2.944	.420	.734
.919	.998	.346	3.068	.398	.776
.999	.999	.331	3.175	.375	.823
1.087	1.000	.320	3.261	.354	.872
1.168	1.000	.314	3.309	.337	.915
1.251	1.000	.312	3.325	.321	.962
				.312	.998
				.309	.999

DEL = .4997	DELU = .0801	DEL* = .2055 CM
THETA = .03358	H = 6.120	UE = 655.6 M/SEC
RHOE = .1676 KG/M**3		RUN = 373

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.336
.040	.962	.758	1.163	.545	.407
.042	.963	.752	1.184	.553	.410
.049	.964	.745	1.215	.564	.414
.065	.967	.724	1.294	.593	.426
.093	.970	.698	1.396	.628	.442
.125	.973	.672	1.497	.660	.459
.155	.975	.648	1.588	.688	.476
.188	.977	.624	1.682	.715	.494
.218	.979	.604	1.762	.737	.511
.288	.982	.562	1.932	.780	.549
.359	.985	.528	2.080	.813	.584
.430	.987	.498	2.217	.842	.620
.501	.990	.471	2.348	.866	.656
.575	.991	.446	2.471	.888	.692
.652	.993	.420	2.609	.910	.734
.723	.995	.398	2.741	.929	.776
.804	.996	.375	2.878	.948	.823
.884	.998	.354	3.016	.965	.872
.954	.999	.337	3.131	.978	.915
1.046	1.000	.321	3.253	.991	.962
1.121	1.000	.312	3.319	.998	.988
1.204	1.001	.309	3.345	1.000	.999

DEL = .5194	DELU = .0910	DEL* = .2262 CM
THETA = .03584	H = 6.311	UE = 657.1 M/SEC
RHOE = .1690 KG/M**3		RUN = 374



MACH = 3.00	P0 = 297.8 KPA	T0 = 319.7 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 319.8 K
ALPHA = 4.20	Z/D = 5.67	PHI = 300.	ALPHA = 4.20	Z/D = 5.67	PHI = 300.
RPM = 0.	PW = 4.31 KPA	REL = 6877237.	RPM = 20000.	PW = 4.31 KPA	REL = 6875620.

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.915	.915	.000	.000	.321
.023	.958	.663	1.064	.661	.443
.033	.963	.636	1.223	.692	.461
.055	.970	.614	1.440	.716	.478
.074	.974	.564	1.597	.768	.520
.104	.977	.530	1.761	.802	.554
.149	.982	.506	1.958	.824	.580
.206	.984	.483	2.095	.845	.608
.261	.986	.462	2.210	.864	.636
.313	.987	.444	2.300	.879	.661
.363	.989	.426	2.407	.895	.688
.418	.991	.412	2.507	.907	.712
.466	.992	.398	2.687	.918	.738
.525	.992	.384	2.596	.930	.765
.576	.994	.371	2.771	.940	.790
.634	.994	.360	2.847	.949	.815
.691	.995	.349	2.914	.958	.841
.746	.996	.339	2.978	.965	.866
.804	.997	.327	3.044	.975	.898
.854	.997	.316	3.114	.983	.928
.922	.998	.308	3.201	.989	.952
.986	.998	.302	3.288	.994	.972
1.043	.999	.298	3.353	.997	.986
1.101	1.000	.295	3.402	.999	.994
1.163	1.000	.295	3.435	1.000	.997
1.224	1.000	.294	3.452	1.000	.999
1.281	1.000	.294	3.460	1.000	.999
1.351	1.000	.294	3.464	1.000	.999

DEL = .3357	DELU = .0450	DEL* = .1275 CM
THETA = .02001	H = 6.370	UE = 673.3 M/SEC
RHDE = .1605 KG/M**3		RUN = 428

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.915	.915	.000	.000	.321
.068	.972	.663	1.526	.661	.443
.083	.975	.636	1.631	.692	.461
.100	.977	.614	1.717	.716	.478
.151	.981	.564	1.923	.768	.520
.205	.984	.530	2.069	.802	.554
.256	.986	.506	2.176	.824	.580
.309	.988	.483	2.284	.845	.608
.363	.989	.462	2.389	.864	.636
.415	.990	.444	2.480	.879	.661
.467	.992	.426	2.574	.895	.688
.520	.993	.412	2.654	.907	.712
.575	.994	.398	2.736	.918	.738
.633	.994	.384	2.822	.930	.765
.690	.995	.371	2.897	.940	.790
.739	.996	.360	2.971	.949	.815
.802	.997	.349	3.046	.958	.841
.855	.997	.339	3.116	.965	.866
.920	.998	.327	3.204	.975	.898
.982	.999	.316	3.285	.983	.928
1.043	.999	.308	3.347	.989	.952
1.097	1.000	.302	3.398	.994	.972
1.166	1.000	.298	3.434	.997	.986
1.221	1.000	.295	3.453	.999	.994
1.278	1.000	.295	3.461	1.000	.997
1.347	1.000	.294	3.466	1.000	.999

DEL = .3363	DELU = .0482	DEL* = .1304 CM
THETA = .01975	H = 6.604	UE = 673.5 M/SEC
RHDE = .1607 KG/M**3		RUN = 429

MACH = 3.00	P0 = 297.8 KPA	T0 = 317.7 K
ALPHA = 4.20	Z/D = 5.67	PHI = 330.
RPM = 0.	PW = 4.76 KPA	REL = 6941686.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.336
.026	.958	.788	1.041	.674	.468
.043	.964	.749	1.198	.712	.492
.061	.968	.707	1.359	.740	.513
.081	.974	.658	1.550	.759	.530
.116	.978	.609	1.742	.805	.575
.138	.980	.587	1.829	.829	.603
.206	.984	.537	2.041	.851	.633
.258	.986	.507	2.174	.868	.658
.314	.988	.485	2.276	.885	.687
.370	.989	.468	2.362	.898	.711
.436	.991	.449	2.455	.912	.739
.492	.992	.434	2.532	.924	.764
.556	.993	.419	2.618	.934	.788
.615	.994	.405	2.696	.946	.819
.679	.995	.390	2.787	.956	.846
.745	.996	.374	2.880	.966	.875
.806	.997	.362	2.958	.974	.901
.873	.998	.351	3.034	.983	.934
.934	.998	.339	3.120	.989	.956
1.006	.999	.327	3.207	.995	.978
1.070	.999	.318	3.272	.998	.990
1.139	1.000	.313	3.310	.998	.997
1.207	1.000	.311	3.330	1.000	.999
1.252	1.000	.309	3.340	1.000	.999
1.310	1.000	.309	3.346	1.000	1.000
1.412	1.000	.308	3.349	1.000	1.000

DEL = .2929	DELU = .0409	DEL* = .1107 CM
THETA = .01815	H = 6.100	UE = 664.3 M/SEC
RHOE = .1701	KG/M**3	RUN = 394

MACH = 3.00	P0 = 297.7 KPA	T0 = 317.7 K
ALPHA = 4.20	Z/D = 5.67	PHI = 330.
RPM = 20000.	PW = 4.76 KPA	REL = 6930539.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.336
.068	.974	.659	1.545	.674	.468
.092	.977	.626	1.674	.712	.492
.114	.979	.600	1.775	.740	.513
.135	.981	.582	1.851	.759	.530
.197	.985	.536	2.046	.805	.575
.250	.986	.511	2.156	.829	.603
.313	.988	.487	2.267	.851	.633
.368	.989	.469	2.357	.868	.658
.430	.991	.449	2.458	.885	.687
.483	.992	.433	2.538	.898	.711
.544	.993	.417	2.627	.912	.739
.602	.994	.404	2.705	.924	.764
.659	.995	.391	2.779	.934	.788
.727	.996	.376	2.868	.946	.819
.785	.997	.364	2.947	.956	.846
.859	.997	.352	3.026	.966	.875
.911	.998	.342	3.098	.974	.901
.983	.999	.330	3.184	.983	.934
1.040	.999	.322	3.239	.989	.956
1.116	1.000	.315	3.296	.995	.978
1.184	1.000	.311	3.326	.998	.990
1.250	1.000	.309	3.342	.999	.997
1.318	1.000	.308	3.349	1.000	.999
1.385	1.000	.308	3.350	1.000	1.000

DEL = .2985	DELU = .0420	DEL* = .1114 CM
THETA = .01785	H = 6.240	UE = 664.5 M/SEC
RHOE = .1700	KG/M**3	RUN = 395

NOTE: Data not available for RPM = 0.

MACH = 3.00	P0 = 297.9 KPA	T0 = 318.4 K
ALPHA = 5.28	Z/D = 5.67	PHI = 120.
RPM = 20000.	PW = 4.46 KPA	REL = 6922665.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.340
.060	.965	.741	1.229	.571	.421
.091	.970	.699	1.392	.628	.446
.123	.974	.660	1.541	.675	.473
.190	.979	.604	1.763	.739	.517
.264	.983	.556	1.960	.788	.561
.335	.986	.521	2.111	.822	.599
.405	.988	.491	2.248	.850	.635
.477	.990	.465	2.379	.874	.672
.550	.992	.442	2.493	.894	.706
.630	.993	.418	2.622	.915	.746
.704	.995	.398	2.740	.932	.785
.781	.996	.378	2.859	.948	.826
.865	.997	.358	2.988	.964	.872
.953	.999	.341	3.103	.977	.915
1.019	.999	.328	3.201	.988	.952
1.110	1.000	.319	3.264	.995	.977
1.190	1.000	.316	3.291	.997	.988
1.277	1.000	.315	3.298	.998	.991
1.354	1.000	.314	3.303	.999	.993
1.440	1.000	.313	3.310	.999	.996

DEL = .5218	DELU = .0880	DEL* = .2165 CM
THETA = .03437	H = 6.299	UE = 663.2 M/SEC
RHOE = .1571 KG/M**3		RUN = 423

MACH = 3.00	P0 = 298.1 KPA	T0 = 316.4 K	MACH = 3.00	P0 = 298.0 KPA	T0 = 316.9 K
ALPHA= 5.28	Z/D= 5.67	PHI= 150.	ALPHA= 5.28	Z/D= 5.67	PHI= 150.
RPM= 0.	PW = 4.97 KPA	REL=6994007.	RPM= 20000.	PW = 4.97 KPA	REL=6975701.

Y/DEL	TT/T0	M	U/UE	RHO/RHDE
.000	.917	.000	.000	.341
.010	.950	.758	.378	.386
.020	.956	.934	.455	.403
.039	.963	1.154	.543	.425
.060	.966	1.266	.584	.440
.082	.969	.711	.613	.468
.125	.973	1.348	.659	.495
.169	.976	1.488	.693	.519
.216	.978	1.599	.721	.541
.261	.980	1.696	.745	.563
.308	.982	1.784	.765	.588
.357	.984	1.864	.786	.612
.407	.985	1.951	.808	.638
.456	.987	2.045	.828	.666
.507	.989	2.138	.848	.697
.555	.990	2.237	.867	.730
.610	.992	2.336	.887	.764
.665	.993	2.450	.904	.798
.718	.995	2.556	.921	.833
.771	.996	2.664	.937	.865
.829	.997	2.772	.951	.898
.881	.998	2.878	.963	.929
.936	.999	2.979	.975	.956
.990	1.000	3.076	.984	.989
1.047	1.000	3.157	.990	.994
1.105	1.000	3.219	.995	.997
1.163	1.001	3.261	.998	.999
1.216	1.001	3.291	.999	1.000
		3.307	.999	

DEL = .7979	DELU= .1455	DEL*= .3599 CM
THETA= .05801	H = 6.203	UE = 661.0 M/SEC
RHDE= .1760 KG/M**3		RUN = 390

Y/DEL	TT/T0	M	U/UE	RHO/RHDE
.000	.918	.000	.000	.341
.032	.956	.949	.461	.386
.042	.961	1.090	.518	.403
.066	.965	1.246	.577	.425
.087	.969	1.347	.613	.440
.130	.973	1.511	.667	.468
.176	.977	1.651	.708	.495
.225	.979	1.767	.741	.519
.271	.982	1.866	.766	.541
.322	.984	1.963	.789	.563
.372	.985	2.061	.812	.588
.423	.987	2.157	.832	.612
.475	.989	2.254	.852	.638
.526	.990	2.352	.870	.666
.582	.992	2.458	.889	.697
.636	.993	2.565	.906	.730
.694	.994	2.671	.923	.764
.749	.995	2.774	.937	.798
.803	.997	2.874	.951	.833
.862	.997	2.963	.962	.865
.920	.998	3.054	.973	.898
.976	.999	3.134	.982	.929
1.033	1.000	3.204	.989	.956
1.089	1.000	3.252	.994	.989
1.151	1.000	3.282	.997	.994
1.212	1.000	3.296	.999	.997
1.268	1.000	3.305	1.000	.999

DEL = .7656	DELU= .1363	DEL*= .3328 CM
THETA= .05338	H = 6.235	UE = 661.1 M/SEC
RHDE= .1751 KG/M**3		RUN = 391

MACH = 3.00	P0 = 297.9 KPA	T0 = 318.3 K	MACH = 3.00	P0 = 297.6 KPA	T0 = 318.6 K
ALPHA = 5.28	Z/D = 5.67	PHI = 170.	ALPHA = 5.28	Z/D = 5.67	PHI = 170.
RPM = 0.	PW = 5.15 KPA	REL = 6921558.	RPM = 20000.	PW = 5.15 KPA	REL = 6915168.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342
.008	.949	.858	.729	.364	.366
.016	.956	.810	.949	.461	.387
.024	.963	.764	1.140	.538	.410
.033	.967	.736	1.253	.580	.426
.051	.970	.706	1.367	.620	.444
.068	.972	.683	1.455	.649	.459
.084	.974	.665	1.526	.672	.472
.102	.976	.648	1.591	.691	.484
.120	.977	.632	1.651	.709	.496
.136	.978	.620	1.700	.723	.506
.175	.980	.597	1.793	.748	.526
.212	.982	.577	1.874	.769	.544
.251	.983	.557	1.956	.788	.563
.290	.985	.540	2.029	.805	.581
.330	.986	.524	2.100	.821	.599
.371	.987	.508	2.174	.836	.618
.411	.989	.492	2.246	.851	.638
.453	.990	.477	2.317	.864	.657
.496	.991	.463	2.388	.877	.678
.540	.992	.449	2.457	.889	.698
.584	.993	.436	2.527	.901	.720
.627	.993	.423	2.597	.912	.742
.672	.994	.410	2.668	.923	.765
.716	.995	.398	2.736	.933	.787
.761	.996	.388	2.801	.942	.809
.807	.997	.377	2.867	.950	.832
.851	.997	.367	2.932	.959	.855
.897	.998	.357	2.999	.967	.880
.945	.999	.346	3.072	.975	.907
.989	.999	.336	3.142	.983	.934
1.035	1.000	.326	3.211	.991	.961
1.080	1.000	.320	3.258	.995	.980
1.124	1.001	.317	3.283	.998	.989

DEL = .9722	DELU = .1493	DEL* = .3964 CM
THETA = .06635	H = 5.974	UE = 662.3 M/SEC
RHOE = .1811	KG/M**3	RUN = 414

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342
.016	.965	.744	1.218	.567	.422
.034	.964	.750	1.196	.559	.418
.051	.968	.717	1.324	.605	.437
.067	.971	.696	1.407	.634	.451
.085	.973	.675	1.487	.660	.465
.101	.975	.657	1.554	.680	.477
.121	.976	.640	1.619	.700	.490
.140	.978	.626	1.675	.716	.501
.177	.980	.603	1.768	.741	.520
.215	.981	.582	1.853	.763	.539
.252	.983	.563	1.931	.782	.557
.293	.984	.544	2.011	.801	.577
.334	.986	.526	2.089	.818	.596
.375	.987	.510	2.163	.834	.615
.414	.988	.494	2.238	.849	.636
.459	.990	.478	2.315	.864	.657
.501	.991	.462	2.390	.878	.679
.546	.992	.448	2.464	.890	.701
.592	.993	.434	2.539	.903	.723
.637	.994	.420	2.612	.914	.747
.680	.995	.408	2.683	.925	.770
.724	.995	.396	2.752	.935	.793
.771	.996	.384	2.824	.945	.818
.817	.997	.373	2.893	.954	.842
.862	.997	.363	2.958	.962	.865
.910	.998	.352	3.027	.970	.890
.957	.999	.343	3.095	.978	.916
1.002	.999	.333	3.162	.985	.942
1.049	1.000	.325	3.225	.992	.967
1.094	1.000	.319	3.267	.996	.984
1.138	1.000	.316	3.289	.999	.992

DEL = .9601	DELU = .1492	DEL* = .3931 CM
THETA = .06562	H = 5.990	UE = 662.5 M/SEC
RHOE = .1811	KG/M**3	RUN = 415

MACH = 3.00	P0 = 298.1 KPA	T0 = 313.9 K	
ALPHA= 5.28	Z/D= 5.67	PHI= 180.	
RPM= 0.	PW = 5.17 KPA	REL=7071965.	

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.008	.952	.838	.824	.408	.376
.014	.956	.811	.947	.461	.389
.019	.961	.774	1.100	.523	.407
.030	.965	.743	1.221	.569	.424
.048	.969	.711	1.346	.614	.443
.061	.971	.690	1.426	.640	.456
.098	.975	.652	1.573	.686	.483
.131	.978	.624	1.682	.718	.505
.168	.979	.600	1.776	.744	.525
.203	.981	.580	1.858	.765	.543
.241	.983	.559	1.945	.786	.563
.274	.984	.543	2.015	.803	.580
.316	.986	.524	2.099	.821	.601
.355	.987	.507	2.177	.838	.622
.397	.988	.490	2.256	.853	.644
.438	.989	.474	2.331	.867	.665
.481	.991	.459	2.405	.881	.686
.525	.991	.445	2.480	.894	.709
.566	.992	.432	2.547	.905	.730
.611	.993	.419	2.620	.916	.753
.658	.994	.406	2.694	.927	.777
.702	.995	.395	2.758	.936	.799
.745	.996	.385	2.816	.944	.819
.791	.996	.375	2.879	.953	.841
.836	.997	.366	2.937	.960	.861
.882	.997	.356	3.000	.968	.885
.927	.998	.347	3.062	.975	.908
.975	.999	.339	3.120	.982	.930
1.020	.999	.331	3.179	.988	.953
1.067	.999	.324	3.227	.993	.972
1.113	1.000	.319	3.263	.997	.987
1.184	1.000	.316	3.293	1.000	.999
1.257	1.000	.315	3.299	1.000	1.001

DEL = .9556	DELU= .1418	DEL*= .3766 CM
THETA= .06371	H = 5.911	UE = 657.1 M/SEC
RHOE= .1829 KG/M**3		RUN = 342

MACH = 3.00	P0 = 298.0 KPA	T0 = 313.9 K
ALPHA= 5.28	Z/D= 5.67	PHI= 180.
RPM= 20000.	PW = 5.17 KPA	REL=7065737.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.080	.974	.663	1.531	.673	.475
.094	.975	.647	1.593	.692	.487
.129	.978	.619	1.702	.724	.509
.165	.980	.595	1.799	.750	.529
.202	.982	.574	1.886	.772	.549
.238	.983	.555	1.966	.791	.568
.278	.985	.535	2.050	.810	.589
.317	.986	.517	2.131	.828	.609
.354	.987	.501	2.201	.842	.628
.400	.988	.483	2.288	.859	.652
.436	.990	.470	2.351	.871	.670
.483	.991	.453	2.435	.886	.695
.524	.992	.440	2.502	.897	.715
.565	.992	.429	2.565	.907	.735
.612	.993	.415	2.640	.919	.759
.655	.994	.404	2.703	.928	.780
.703	.995	.392	2.772	.938	.803
.746	.996	.383	2.831	.946	.823
.791	.996	.373	2.888	.954	.844
.838	.997	.364	2.947	.961	.865
.880	.997	.356	3.002	.968	.885
.927	.998	.347	3.062	.975	.907
.975	.999	.338	3.124	.982	.931
1.024	.999	.330	3.183	.988	.954
1.074	.999	.323	3.233	.993	.974
1.121	1.000	.319	3.264	.997	.987
1.184	1.000	.316	3.288	.999	.996
1.254	1.000	.315	3.296	1.000	1.000

DEL = .9557	DELU= .1492	DEL*= .3748 CM
THETA= .06059	H = 6.186	UE = 657.3 M/SEC
RHOE= .1829 KG/M**3		RUN = 343



MACH = 3.00	P0 = 299.1 KPA	T0 = 313.6 K	MACH = 3.00	P0 = 298.4 KPA	T0 = 315.1 K
ALPHA = 5.28	Z/D = 5.67	PHI = 190.	ALPHA = 5.28	Z/D = 5.67	PHI = 190.
RPM = 0.	PW = 5.16 KPA	REL = 7152989.	RPM = 20000.	PW = 5.16 KPA	REL = 7067059.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.341
.008	.950	.852	.758	.379	.412
.016	.957	.803	.980	.475	.426
.034	.966	.743	1.225	.571	.445
.049	.969	.713	1.342	.613	.460
.068	.973	.688	1.438	.645	.474
.087	.974	.669	1.510	.669	.497
.121	.977	.637	1.633	.705	.519
.157	.980	.613	1.731	.733	.539
.197	.982	.591	1.819	.757	.558
.235	.984	.572	1.899	.777	.577
.275	.985	.553	1.978	.795	.596
.315	.987	.535	2.055	.813	.615
.354	.988	.519	2.127	.829	.635
.395	.990	.504	2.197	.843	.653
.438	.991	.488	2.272	.858	.672
.482	.992	.472	2.345	.872	.693
.527	.993	.458	2.419	.885	.712
.571	.995	.444	2.493	.897	.733
.616	.996	.430	2.565	.909	.753
.661	.997	.417	2.634	.920	.774
.705	.998	.406	2.703	.930	.795
.750	.999	.394	2.773	.940	.818
.794	1.000	.383	2.840	.949	.839
.841	1.001	.372	2.908	.958	.863
.888	1.002	.362	2.975	.966	.889
.936	1.002	.352	3.042	.974	.913
.981	1.003	.342	3.108	.982	.938
1.027	1.004	.333	3.174	.989	.963
1.074	1.005	.325	3.234	.995	.982
1.117	1.005	.320	3.268	.999	.991
1.165	1.006	.318	3.290	1.001	.996
1.209	1.006	.316	3.300	1.002	

DEL = .9589	DELTA = .06482	RHOE = .1850	KG/M**3	DELU = .1484	H = 6.147	DEL* = .3984	CM	UE = 655.7	M/SEC	RUN = 406
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Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.341
.024	.963	.760	1.154	.544	.412
.033	.966	.736	1.252	.580	.426
.050	.970	.705	1.372	.623	.445
.067	.972	.681	1.463	.652	.460
.085	.974	.661	1.541	.677	.474
.119	.977	.630	1.659	.712	.497
.154	.980	.603	1.766	.741	.519
.192	.981	.581	1.856	.765	.539
.230	.983	.561	1.938	.785	.558
.269	.985	.543	2.017	.803	.577
.308	.986	.525	2.094	.820	.596
.348	.987	.510	2.164	.835	.615
.389	.989	.495	2.233	.849	.635
.430	.990	.480	2.304	.863	.653
.471	.991	.467	2.371	.875	.672
.516	.992	.453	2.441	.887	.693
.559	.993	.440	2.504	.898	.712
.603	.994	.428	2.572	.909	.733
.645	.995	.416	2.634	.918	.753
.689	.995	.405	2.698	.928	.774
.732	.996	.395	2.762	.937	.795
.780	.997	.383	2.829	.946	.818
.823	.998	.374	2.889	.954	.839
.866	.999	.364	2.955	.962	.863
.916	1.000	.353	3.025	.971	.889
.960	1.000	.344	3.089	.978	.913
1.004	1.001	.334	3.156	.986	.938
1.052	1.002	.326	3.220	.992	.963
1.096	1.002	.320	3.267	.997	.982
1.140	1.002	.317	3.290	1.000	.991
1.183	1.002	.315	3.301	1.001	.996

DEL = .9797	DELTA = .06539	RHOE = .1835	KG/M**3	DELU = .1481	H = 6.049	DEL* = .3955	CM	UE = 658.0	M/SEC	RUN = 407
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MACH = 3.00	P0 = 299.5 KPA	T0 = 310.8 K	MACH = 3.00	P0 = 298.7 KPA	T0 = 310.9 K
ALPHA= 5.28	Z/D= 5.67	PHI= 210.	ALPHA= 5.28	Z/D= 5.67	PHI= 210.
RPM= 0.	PW = 4.99 KPA	REL=7216580.	RPM= 20000.	PW = 4.98 KPA	REL=7178315.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.010	.950	.851	.763	.541	.413
.017	.955	.822	.899	.582	.428
.039	.963	.765	1.136	.609	.440
.061	.967	.738	1.245	.632	.451
.106	.971	.697	1.402	.666	.470
.148	.975	.664	1.529	.692	.486
.194	.977	.637	1.635	.715	.502
.241	.980	.612	1.733	.734	.516
.291	.982	.590	1.823	.754	.532
.342	.984	.565	1.923	.774	.550
.392	.986	.543	2.017	.792	.568
.443	.988	.521	2.115	.811	.589
.497	.989	.500	2.213	.830	.611
.549	.991	.479	2.313	.851	.639
.604	.992	.457	2.418	.870	.668
.660	.994	.437	2.523	.891	.702
.716	.995	.418	2.629	.909	.737
.773	.997	.398	2.743	.927	.774
.828	.998	.380	2.851	.943	.815
.882	.999	.364	2.955	.960	.859
.943	1.000	.349	3.057	.973	.899
1.003	1.001	.336	3.143	.983	.933
1.061	1.002	.328	3.208	.991	.963
1.118	1.002	.322	3.250	.996	.981
1.181	1.003	.320	3.269	.998	.989
1.240	1.003	.318	3.279	.999	.996
1.327	1.003	.317	3.289		

DEL = .7533	DELU= .1380	DEL*= .3405 CM	DEL = .8097	DELU= .1582	DEL*= .3789 CM
THETA= .05491	H = 6.201	UE = 653.0 M/SEC	THETA= .06080	H = 6.231	UE = 654.0 M/SEC
RHOE= .1817 KG/M**3		RUN = 359	RHOE= .1814 KG/M**3		RUN = 360

MACH = 3.00 P0 = 298.0 KPA T0 = 311.8 K  
 ALPHA= 5.28 Z/D= 5.67 PHI= 240.  
 RPM= 0. PW = 4.45 KPA REL=7139383.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.337
.016	.950	.844	.792	.392	.366
.036	.959	.789	1.039	.497	.392
.053	.963	.754	1.178	.551	.410
.087	.968	.714	1.334	.607	.433
.118	.972	.684	1.449	.645	.452
.154	.975	.651	1.576	.684	.475
.188	.978	.621	1.695	.719	.498
.223	.980	.594	1.801	.747	.520
.278	.983	.558	1.952	.785	.554
.332	.985	.527	2.086	.815	.587
.387	.987	.501	2.203	.839	.617
.443	.989	.478	2.310	.860	.646
.503	.991	.457	2.416	.879	.677
.555	.992	.440	2.505	.894	.703
.618	.993	.421	2.607	.910	.735
.679	.994	.404	2.701	.924	.765
.738	.995	.387	2.803	.938	.799
.800	.996	.372	2.899	.951	.832
.863	.997	.357	2.998	.963	.867
.928	.998	.343	3.092	.974	.902
.967	.999	.335	3.148	.980	.923
1.029	.999	.324	3.228	.989	.955
1.091	1.000	.317	3.284	.995	.977
1.162	1.000	.312	3.322	.998	.992
1.229	1.000	.310	3.338	1.000	.998

DEL = .4870 DELU = .0821 DEL\* = .2056 CM  
 THETA= .03294 H = 6.241 UE = 657.7 M/SEC  
 RHOE= .1623 KG/M\*\*3 RUN = 377

MACH = 3.00 P0 = 298.0 KPA T0 = 312.0 K  
 ALPHA= 5.28 Z/D= 5.67 PHI= 240.  
 RPM= 2000. PW = 4.46 KPA REL=7137873.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.332
.045	.982	.759	1.156	.540	.400
.050	.963	.750	1.193	.554	.406
.083	.967	.720	1.309	.595	.422
.113	.970	.697	1.397	.626	.436
.142	.972	.674	1.487	.655	.451
.175	.974	.652	1.571	.680	.466
.205	.976	.629	1.663	.707	.484
.261	.980	.593	1.806	.746	.513
.310	.982	.561	1.937	.778	.542
.366	.985	.532	2.062	.806	.571
.417	.986	.507	2.174	.830	.600
.473	.988	.483	2.289	.853	.630
.529	.990	.461	2.395	.872	.660
.584	.991	.440	2.502	.890	.691
.644	.993	.421	2.608	.907	.723
.695	.994	.402	2.714	.922	.757
.756	.995	.384	2.821	.937	.792
.815	.996	.367	2.927	.951	.828
.880	.998	.351	3.036	.964	.867
.914	.998	.343	3.092	.970	.888
.975	.999	.329	3.192	.981	.925
1.042	1.000	.317	3.284	.991	.960
1.101	1.000	.310	3.338	.996	.982
1.165	1.000	.306	3.369	.999	.994

DEL = .5133 DELU = .0940 DEL\* = .2294 CM  
 THETA= .03537 H = 6.486 UE = 660.3 M/SEC  
 RHOE= .1650 KG/M\*\*3 RUN = 378

MACH = 3.00	P0 = 298.1 KPA	T0 = 316.2 K		
ALPHA= 6.34	Z/D= 5.67	PHI= 0.		
RPM= 0.	PW = 5.30 KPA	REL=7003632.		
Y/DEL	TT/T0	T/T0	U/UE	RHO/RHOE
.000	.919	.919	.000	.353
.033	.965	.755	.557	.430
.051	.969	.722	.605	.450
.071	.973	.680	.659	.477
.081	.976	.657	.687	.494
.119	.980	.608	.743	.535
.147	.982	.581	.771	.559
.178	.984	.555	.797	.585
.219	.986	.530	.822	.613
.252	.988	.512	.840	.634
.320	.990	.489	.862	.665
.388	.991	.468	.881	.694
.460	.993	.446	.900	.728
.538	.994	.426	.918	.763
.616	.995	.411	.930	.791
.683	.996	.397	.942	.819
.752	.997	.383	.954	.848
.836	.998	.366	.967	.887
.916	.999	.354	.977	.918
.990	.999	.346	.984	.940
1.063	1.000	.339	.990	.959
1.145	1.000	.331	.996	.981
1.215	1.001	.328	.998	.991
1.302	1.001	.326	1.000	.997
1.392	1.001	.325	1.001	.999
1.552	1.001	.325	1.001	1.000
DEL = .2313	DELU= .0306		DEL*= .0811 CM	
THETA= .01402	H = 5.783		UE = 654.6 M/SEC	
RHOE= .1825 KG/M**3			RUN = 351	

MACH = 3.00	P0 = 297.8 KPA	T0 = 316.5 K		
ALPHA= 6.34	Z/D= 5.67	PHI= 0.		
RPM= 2000.	PW = 5.30 KPA	REL=6980548.		
Y/DEL	TT/T0	T/T0	U/UE	RHO/RHOE
.000	.919	.919	.000	.354
.076	.977	.638	.709	.509
.114	.981	.600	.751	.542
.149	.983	.570	.783	.571
.178	.985	.546	.807	.595
.217	.987	.525	.827	.619
.252	.988	.508	.843	.640
.324	.990	.485	.864	.670
.398	.991	.464	.884	.700
.465	.993	.444	.901	.732
.544	.994	.424	.919	.766
.615	.995	.410	.931	.793
.684	.996	.396	.943	.822
.767	.997	.379	.957	.857
.829	.998	.368	.966	.883
.917	.998	.355	.976	.914
.994	.999	.345	.985	.942
1.077	1.000	.337	.991	.964
1.156	1.000	.331	.996	.982
1.238	1.000	.328	.998	.992
1.324	1.000	.326	1.000	.997
1.398	1.000	.325	1.000	.999
1.573	1.000	.325	1.000	1.000
DEL = .2287	DELU= .0309		DEL*= .0796 CM	
THETA= .01343	H = 5.926		UE = 655.1 M/SEC	
RHOE= .1821 KG/M**3			RUN = 352	

MACH = 3.00	P0 = 298.2 KPA	T0 = 309.2 K	MACH = 3.00	P0 = 298.3 KPA	T0 = 309.4 K
ALPHA= 6.34	Z/D= 5.67	PHI= 30.	ALPHA= 6.34	Z/D= 5.67	PHI= 30.
RPM= 0.	PW = 4.92 KPA	REL=7227258.	RPM= 20000.	PW = 4.92 KPA	REL=7213892.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.031	.967	.731	1.269	.587	.432
.061	.972	.679	1.470	.656	.466
.083	.976	.644	1.606	.697	.491
.109	.979	.607	1.751	.738	.521
.146	.982	.575	1.882	.772	.550
.177	.984	.552	1.978	.795	.573
.213	.986	.529	2.079	.818	.598
.282	.988	.497	2.224	.848	.637
.346	.990	.474	2.332	.869	.667
.417	.991	.454	2.434	.887	.697
.485	.993	.432	2.547	.906	.732
.548	.994	.416	2.637	.920	.761
.619	.995	.398	2.741	.935	.796
.691	.996	.384	2.824	.947	.824
.756	.997	.373	2.889	.955	.847
.839	.998	.361	2.969	.965	.876
.905	.999	.350	3.047	.974	.905
.985	.999	.338	3.126	.983	.935
1.061	1.000	.329	3.194	.991	.962
1.136	1.000	.323	3.235	.995	.978
1.205	1.000	.320	3.259	.998	.988
1.284	1.001	.318	3.275	.999	.994
1.365	1.001	.317	3.283	1.000	.998
1.446	1.001	.317	3.286	1.000	.999

DEL = .2461	DELU= .0319	DEL*= .0873 CM
THETA= .01477	H = 5.910	UE = 651.4 M/SEC
RHOE= .1767 KG/M**3		RUN = 367

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.344
.031	.967	.656	1.557	.683	.482
.061	.972	.638	1.629	.704	.496
.083	.976	.621	1.695	.723	.509
.109	.979	.590	1.821	.757	.536
.146	.982	.562	1.934	.785	.562
.177	.984	.538	2.039	.809	.588
.213	.986	.507	2.176	.838	.623
.282	.988	.484	2.284	.860	.653
.346	.990	.460	2.401	.881	.687
.417	.991	.441	2.500	.898	.717
.485	.993	.422	2.602	.914	.749
.548	.994	.405	2.695	.928	.780
.619	.995	.390	2.784	.941	.810
.691	.996	.376	2.870	.952	.840
.756	.997	.364	2.951	.963	.869
.839	.998	.351	3.033	.973	.900
.905	.999	.341	3.103	.981	.927
.985	.999	.331	3.179	.989	.956
1.061	1.000	.325	3.223	.994	.973
1.136	1.000	.320	3.257	.997	.987
1.205	1.000	.318	3.274	.999	.994
1.284	1.001	.317	3.282	1.000	.997
1.365	1.001	.317	3.287	1.000	.999

DEL = .2501	DELU= .0364	DEL*= .0919 CM
THETA= .01481	H = 6.208	UE = 651.8 M/SEC
RHOE= .1764 KG/M**3		RUN = 368

MACH = 3.00	P0 = 297.9 KPA	T0 = 311.8 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 312.1 K
ALPHA = 6.34	Z/D = 5.67	PHI = 60.	ALPHA = 6.34	Z/D = 5.67	PHI = 60.
RPM = 0.	PW = 4.02 KPA	REL = 7141462.	RPM = 20000.	PW = 4.02 KPA	REL = 7129434.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.324
.027	.958	.971	1.027	.673	.453
.043	.964	.744	1.215	.697	.468
.060	.970	.694	1.410	.747	.505
.090	.975	.642	1.609	.768	.524
.120	.978	.606	1.754	.810	.567
.146	.981	.576	1.875	.834	.596
.204	.984	.531	2.064	.852	.622
.265	.987	.500	2.206	.872	.651
.317	.988	.480	2.302	.890	.684
.379	.990	.457	2.412	.905	.713
.439	.991	.437	2.518	.918	.741
.501	.993	.419	2.614	.930	.770
.563	.994	.403	2.709	.937	.787
.621	.995	.388	2.797	.950	.821
.683	.996	.373	2.889	.961	.853
.740	.997	.361	2.965	.969	.880
.815	.997	.350	3.042	.977	.908
.877	.998	.338	3.123	.985	.937
.940	.999	.327	3.206	.991	.959
1.007	.999	.316	3.290	.995	.977
1.067	1.000	.308	3.349	.997	.986
1.145	1.000	.302	3.397	.999	.994
1.216	1.001	.300	3.421		
1.274	1.001	.298	3.436		

DEL = .2849	DELU = .0397	DEL* = .1095 CM
THETA = .01709	H = 6.411	UE = 663.7 M/SEC
RHOE = .1528	KG/M**3	RUN = 383

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.916	.916	.000	.000	.324
.027	.958	.971	1.027	.673	.453
.043	.964	.744	1.215	.697	.468
.060	.970	.694	1.410	.747	.505
.090	.975	.642	1.609	.768	.524
.120	.978	.606	1.754	.810	.567
.146	.981	.576	1.875	.834	.596
.204	.984	.531	2.064	.852	.622
.265	.987	.500	2.206	.872	.651
.317	.988	.480	2.302	.890	.684
.379	.990	.457	2.412	.905	.713
.439	.991	.437	2.518	.918	.741
.501	.993	.419	2.614	.930	.770
.563	.994	.403	2.709	.937	.787
.621	.995	.388	2.797	.950	.821
.683	.996	.373	2.889	.961	.853
.740	.997	.361	2.965	.969	.880
.815	.997	.350	3.042	.977	.908
.877	.998	.338	3.123	.985	.937
.940	.999	.327	3.206	.991	.959
1.007	.999	.316	3.290	.995	.977
1.067	1.000	.308	3.349	.997	.986
1.145	1.000	.302	3.397	.999	.994
1.216	1.001	.300	3.421		
1.274	1.001	.298	3.436		

DEL = .2870	DELU = .0398	DEL* = .1076 CM
THETA = .01651	H = 6.518	UE = 663.9 M/SEC
RHOE = .1524	KG/M**3	RUN = 384

MACH = 3.00	P0 = 298.2 KPA	T0 = 318.5 K	MACH = 3.00	P0 = 297.8 KPA	T0 = 318.6 K
ALPHA= 6.34	Z/D= 5.67	PHI= 120.	ALPHA= 6.34	Z/D= 5.67	PHI= 120.
RPM= 0.	PW = 4.28 KPA	REL=6914011.	RPM= 20000.	PW = 4.28 KPA	REL=6909603.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.343
.015	.949	.849	.769	.381	.404
.044	.959	.787	1.043	.498	.513
.107	.967	.720	1.310	.598	.585
.175	.973	.669	1.508	.663	.634
.248	.978	.611	1.735	.729	.719
.319	.982	.561	1.940	.781	.781
.393	.986	.519	2.120	.822	.821
.466	.988	.483	2.287	.855	.850
.541	.990	.456	2.419	.879	.876
.619	.992	.427	2.573	.904	.898
.694	.994	.403	2.709	.925	.918
.778	.996	.379	2.852	.944	.936
.857	.997	.358	2.987	.961	.953
.931	.998	.341	3.103	.975	.969
1.016	.999	.325	3.218	.987	.981
1.106	1.000	.314	3.306	.996	.991
1.181	1.000	.309	3.340	.999	.996
1.269	1.000	.308	3.349	1.000	.999

DEL = .5159	DELU = .0946	DEL* = .2279 CM
THETA= .03598	H = 6.335	UE = 665.1 M/SEC
RHOE= .1526 KG/M**3		RUN = 424

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.343
.047	.960	.780	1.075	.513	.404
.086	.966	.732	1.265	.585	.430
.110	.971	.696	1.406	.634	.453
.181	.978	.623	1.686	.719	.506
.264	.983	.565	1.921	.781	.557
.329	.986	.525	2.096	.821	.601
.405	.988	.493	2.241	.850	.639
.480	.990	.464	2.380	.876	.679
.558	.992	.440	2.507	.898	.717
.636	.993	.416	2.635	.918	.758
.716	.995	.395	2.756	.936	.798
.798	.996	.374	2.882	.953	.842
.884	.997	.355	3.008	.969	.888
.966	.998	.340	3.114	.981	.928
1.055	.999	.327	3.208	.991	.965
1.130	1.000	.320	3.256	.996	.984
1.220	1.000	.317	3.283	.999	.995
1.308	1.000	.316	3.289	.999	.997

DEL = .5003	DELU = .0854	DEL* = .2067 CM
THETA= .03318	H = 6.228	UE = 662.1 M/SEC
RHOE= .1493 KG/M**3		RUN = 425



MACH = 3.00	P0 = 297.8 KPA	T0 = 317.2 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 317.4 K
ALPHA = 6.34	Z/D = 5.67	PHI = 150.	ALPHA = 6.34	Z/D = 5.67	PHI = 150.
RPM = 0.	PW = 4.89 KPA	REL = 6962482.	RPM = 20000.	PW = 4.89 KPA	REL = 6946484.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.337
.009	.949	.853	.747	.463	.383
.024	.958	.795	1.011	.541	.407
.043	.963	.754	1.176	.585	.424
.062	.966	.732	1.264	.614	.436
.082	.968	.713	1.338	.663	.462
.122	.972	.680	1.463	.697	.483
.163	.974	.657	1.553	.727	.504
.202	.976	.638	1.626	.751	.524
.248	.977	.618	1.704	.775	.545
.290	.979	.601	1.772	.798	.568
.336	.981	.582	1.849	.820	.593
.384	.982	.562	1.936	.839	.618
.430	.984	.542	2.021	.860	.646
.476	.986	.520	2.114	.880	.678
.524	.987	.498	2.217	.898	.711
.574	.989	.475	2.328	.916	.746
.620	.991	.454	2.432	.931	.781
.664	.992	.434	2.534	.946	.817
.721	.994	.410	2.670	.957	.850
.774	.995	.389	2.789	.968	.882
.824	.996	.373	2.889	.978	.915
.872	.997	.359	2.980	.986	.942
.926	.998	.345	3.077	.991	.963
.977	.999	.332	3.166	.995	.978
1.028	1.000	.322	3.242	.997	.985
1.079	1.000	.316	3.288	.998	.991
1.134	1.000	.313	3.313	.999	.993
1.181	1.000	.312	3.323	.999	.995
1.230	1.000	.311	3.329	1.000	.998
1.359	1.000	.309	3.342		

DEL = .8664	DELU = .1656	DEL* = .4045 CM
THETA = .06407	H = 6.313	UE = 663.9 M/SEC
RHOE = .1752 KG/M**3		RUN = 392

DEL = .8002	DELU = .1453	DEL* = .3548 CM
THETA = .05621	H = 6.312	UE = 663.6 M/SEC
RHOE = .1741 KG/M**3		RUN = 393

MACH = 3.00 ALPHA = 6.34 RPM = 0.				P0 = 297.7 KPA Z/O = 5.67 PW = 5.14 KPA				T0 = 318.8 K PHI = 170. REL = 6903101.				MACH = 3.00 ALPHA = 6.34 RPM = 2000.				P0 = 297.6 KPA Z/O = 5.67 PW = 5.14 KPA				T0 = 318.9 K PHI = 170. REL = 6896908.			
Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE	Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.341	.000	.917	.917	.000	.917	.340	.000	.917	.917	.000	.917	.340	.000	.917	.917	.000	.917	.340
.007	.952	.837	.827	.408	.373	.022	.960	.778	1.082	.515	.401	.022	.960	.778	1.082	.515	.401	.022	.960	.778	1.082	.515	.401
.015	.960	.780	1.073	.512	.400	.036	.966	.705	1.267	.584	.426	.036	.966	.705	1.267	.584	.426	.036	.966	.705	1.267	.584	.426
.022	.965	.743	1.222	.568	.421	.052	.969	.683	1.453	.648	.456	.052	.969	.683	1.453	.648	.456	.052	.969	.683	1.453	.648	.456
.036	.969	.706	1.365	.619	.442	.068	.972	.664	1.527	.671	.470	.068	.972	.664	1.527	.671	.470	.068	.972	.664	1.527	.671	.470
.052	.972	.682	1.456	.649	.458	.086	.974	.633	1.648	.707	.493	.086	.974	.633	1.648	.707	.493	.086	.974	.633	1.648	.707	.493
.067	.974	.662	1.533	.673	.472	.118	.976	.610	1.736	.731	.511	.118	.976	.610	1.736	.731	.511	.118	.976	.610	1.736	.731	.511
.082	.975	.644	1.602	.694	.485	.150	.978	.590	1.819	.753	.528	.150	.978	.590	1.819	.753	.528	.150	.978	.590	1.819	.753	.528
.115	.978	.615	1.717	.727	.508	.185	.980	.570	1.899	.774	.547	.185	.980	.570	1.899	.774	.547	.185	.980	.570	1.899	.774	.547
.148	.980	.592	1.809	.751	.528	.221	.982	.554	1.970	.790	.563	.221	.982	.554	1.970	.790	.563	.221	.982	.554	1.970	.790	.563
.182	.982	.573	1.887	.771	.545	.254	.983	.537	2.042	.807	.581	.254	.983	.537	2.042	.807	.581	.254	.983	.537	2.042	.807	.581
.216	.983	.555	1.965	.790	.563	.291	.985	.521	2.110	.822	.598	.291	.985	.521	2.110	.822	.598	.291	.985	.521	2.110	.822	.598
.252	.984	.539	2.033	.805	.580	.329	.986	.506	2.180	.836	.616	.329	.986	.506	2.180	.836	.616	.329	.986	.506	2.180	.836	.616
.289	.986	.525	2.097	.819	.596	.367	.987	.492	2.246	.849	.634	.367	.987	.492	2.246	.849	.634	.367	.987	.492	2.246	.849	.634
.324	.987	.512	2.154	.831	.611	.404	.988	.478	2.312	.862	.652	.404	.988	.478	2.312	.862	.652	.404	.988	.478	2.312	.862	.652
.362	.988	.498	2.219	.845	.628	.442	.989	.464	2.383	.875	.672	.442	.989	.464	2.383	.875	.672	.442	.989	.464	2.383	.875	.672
.399	.989	.485	2.277	.856	.644	.483	.990	.451	2.449	.886	.692	.483	.990	.451	2.449	.886	.692	.483	.990	.451	2.449	.886	.692
.439	.990	.473	2.335	.867	.660	.524	.991	.438	2.516	.898	.712	.524	.991	.438	2.516	.898	.712	.524	.991	.438	2.516	.898	.712
.478	.991	.462	2.390	.877	.676	.563	.992	.425	2.584	.908	.733	.563	.992	.425	2.584	.908	.733	.563	.992	.425	2.584	.908	.733
.518	.991	.451	2.447	.887	.693	.605	.993	.414	2.646	.916	.753	.605	.993	.414	2.646	.916	.753	.605	.993	.414	2.646	.916	.753
.554	.992	.440	2.502	.896	.710	.645	.994	.403	2.711	.927	.775	.645	.994	.403	2.711	.927	.775	.645	.994	.403	2.711	.927	.775
.596	.993	.428	2.566	.906	.729	.686	.995	.392	2.773	.936	.795	.686	.995	.392	2.773	.936	.795	.686	.995	.392	2.773	.936	.795
.637	.993	.417	2.627	.916	.749	.727	.996	.383	2.830	.944	.815	.727	.996	.383	2.830	.944	.815	.727	.996	.383	2.830	.944	.815
.677	.994	.407	2.686	.924	.768	.768	.996	.373	2.890	.952	.836	.768	.996	.373	2.890	.952	.836	.768	.996	.373	2.890	.952	.836
.713	.995	.398	2.736	.932	.785	.810	.996	.363	2.952	.960	.858	.810	.996	.363	2.952	.960	.858	.810	.996	.363	2.952	.960	.858
.757	.996	.388	2.800	.941	.806	.852	.997	.355	3.009	.967	.879	.852	.997	.355	3.009	.967	.879	.852	.997	.355	3.009	.967	.879
.801	.996	.377	2.866	.949	.829	.893	.998	.345	3.074	.974	.903	.893	.998	.345	3.074	.974	.903	.893	.998	.345	3.074	.974	.903
.843	.997	.367	2.928	.957	.851	.935	.998	.337	3.136	.981	.927	.935	.998	.337	3.136	.981	.927	.935	.998	.337	3.136	.981	.927
.880	.997	.359	2.985	.964	.872	.975	.999	.328	3.195	.987	.949	.975	.999	.328	3.195	.987	.949	.975	.999	.328	3.195	.987	.949
.923	.998	.349	3.049	.972	.896	1.016	.999	.322	3.244	.992	.969	1.016	.999	.322	3.244	.992	.969	1.016	.999	.322	3.244	.992	.969
.964	.999	.340	3.115	.979	.920	1.053	1.000	.317	3.282	.996	.984	1.053	1.000	.317	3.282	.996	.984	1.053	1.000	.317	3.282	.996	.984
1.004	.999	.332	3.173	.986	.943	1.099	1.000	.314	3.307	.999	.998	1.099	1.000	.314	3.307	.999	.998	1.099	1.000	.314	3.307	.999	.998
1.041	1.000	.325	3.225	.991	.963	1.140	1.000	.313	3.317	1.000	.998	1.140	1.000	.313	3.317	1.000	.998	1.140	1.000	.313	3.317	1.000	.998
1.085	1.000	.319	3.268	.996	.980	1.181	1.000					1.181	1.000					1.181	1.000				
1.127	1.000	.315	3.299	.999	.993																		
1.168	1.000	.314	3.309	1.000	.997																		

DEL = 1.0807	OELU = .1559	DEL* = .4290 CM
THETA = .07253	H = 5.915	UE = 663.3 M/SEC
RHOE = .1812 KG/M**3		RUN = 416

DEL = 1.0681	OELU = .1650	DEL* = .4348 CM
THETA = .07187	H = 6.050	UE = 663.8 M/SEC
RHOE = .1816 KG/M**3		RUN = 417

MACH = 3.00	P0 = 297.8 KPA	T0 = 314.1 K	MACH = 3.00	P0 = 297.8 KPA	T0 = 313.9 K
ALPHA= 6.34	Z/D= 5.67	PHI= 180.	ALPHA= 6.34	Z/D= 5.67	PHI= 180.
RPM= 0.	PW = 5.15 KPA	REL=7057443.	RPM= 0.	PW = 5.15 KPA	REL=7057443.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.342
.007	.952	.965	1.241	.575	.425
.013	.958	.970	1.367	.620	.445
.022	.965	.972	1.455	.649	.460
.038	.969	.974	1.537	.675	.475
.053	.972	.977	1.656	.710	.498
.068	.974	.979	1.752	.736	.517
.098	.977	.981	1.850	.762	.539
.130	.979	.982	1.937	.784	.559
.162	.981	.984	2.023	.803	.580
.194	.983	.986	2.105	.821	.601
.229	.984	.987	2.181	.837	.621
.264	.986	.988	2.263	.853	.643
.298	.987	.989	2.335	.867	.663
.335	.988	.990	2.406	.880	.684
.373	.989	.991	2.473	.891	.704
.411	.990	.992	2.533	.901	.722
.448	.991	.993	2.590	.910	.740
.487	.992	.993	2.647	.919	.759
.526	.993	.994	2.700	.927	.776
.567	.993	.994	2.748	.934	.792
.605	.994	.995	2.796	.940	.809
.647	.995	.995	2.839	.946	.823
.686	.995	.996	2.887	.952	.840
.726	.996	.996	2.937	.959	.858
.767	.996	.997	2.985	.965	.876
.812	.997	.997	3.037	.971	.895
.852	.997	.998	3.089	.977	.915
.897	.998	.998	3.143	.983	.935
.937	.998	.999	3.191	.988	.954
.980	.999	.999	3.236	.993	.972
1.021	.999	.999	3.274	.997	.987
1.062	1.000	.999	3.295	.999	.995
1.103	1.000	1.000	3.304	1.000	.999
1.145	1.000	1.000	3.308	1.000	1.001
1.184	1.000	1.000			
1.250	1.000	1.000			

DEL = 1.0621	DELU= .1454	DEL*= .4018 CM
THETA= .06815	H = 5.895	UE = 658.2 M/SEC
RHOE= .1833	KG/M**3	RUN = 344

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.918	.918	.000	.000	.341
.007	.952	.965	.832	.410	.374
.013	.958	.970	1.000	.482	.410
.022	.965	.972	1.206	.562	.419
.038	.969	.974	1.358	.617	.442
.053	.972	.977	1.458	.650	.459
.068	.974	.979	1.533	.673	.472
.098	.977	.981	1.665	.712	.498
.130	.979	.982	1.764	.740	.519
.162	.981	.984	1.854	.763	.538
.194	.983	.986	1.937	.783	.557
.229	.984	.987	2.018	.802	.577
.264	.986	.988	2.096	.819	.597
.298	.987	.989	2.161	.833	.613
.335	.988	.990	2.234	.848	.633
.373	.989	.991	2.303	.861	.652
.411	.990	.992	2.368	.873	.671
.448	.991	.993	2.429	.884	.689
.487	.992	.993	2.491	.894	.707
.526	.993	.994	2.549	.904	.725
.567	.993	.994	2.609	.913	.744
.605	.994	.995	2.665	.922	.762
.647	.995	.995	2.717	.929	.779
.686	.995	.996	2.767	.936	.796
.726	.996	.996	2.816	.943	.813
.767	.996	.997	2.870	.950	.832
.812	.997	.997	2.925	.957	.851
.852	.997	.998	2.974	.963	.869
.897	.998	.998	3.028	.970	.889
.937	.998	.999	3.088	.977	.912
.980	.999	.999	3.142	.982	.932
1.021	.999	.999	3.188	.987	.950
1.062	1.000	.999	3.234	.992	.968
1.103	1.000	1.000	3.274	.996	.984
1.145	1.000	1.000	3.297	.999	.993
1.184	1.000	1.000	3.307	1.000	.997
1.250	1.000	1.000	3.312	1.000	1.000

DEL = 1.0621	DELU= .1454	DEL*= .4018 CM
THETA= .06815	H = 5.895	UE = 658.2 M/SEC
RHOE= .1833	KG/M**3	RUN = 344

DEL = 1.0422	DELU= .1324	DEL*= .3781 CM
THETA= .06556	H = 5.768	UE = 657.9 M/SEC
RHOE= .1829	KG/M**3	RUN = 345

MACH = 3.00	P0 = 298.5 KPA	T0 = 316.1 K	MACH = 3.00	P0 = 298.1 KPA	T0 = 316.6 K
ALPHA= 6.34	Z/O= 5.67	PHI= 190.	ALPHA= 6.34	Z/D= 5.67	PHI= 190.
RPM= 0.	PW = 5.15 KPA	REL=7023515.	RPM= 20000.	PW = 5.15 KPA	REL=6995273.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.341
.007	.949	.852	.753	.528	.406
.011	.954	.824	.887	.567	.420
.022	.963	.757	1.167	.619	.442
.036	.969	.715	1.331	.653	.460
.053	.971	.688	1.436	.698	.487
.082	.975	.650	1.579	.732	.512
.116	.977	.620	1.698	.758	.532
.148	.980	.598	1.786	.779	.552
.181	.981	.579	1.863	.799	.572
.217	.983	.560	1.944	.816	.591
.252	.984	.544	2.013	.830	.609
.288	.986	.529	2.077	.844	.626
.326	.987	.514	2.145	.856	.643
.362	.988	.501	2.205	.866	.657
.402	.989	.487	2.268	.875	.672
.439	.990	.476	2.326	.884	.687
.476	.991	.463	2.385	.893	.703
.517	.992	.452	2.445	.901	.719
.556	.993	.440	2.507	.909	.734
.597	.993	.428	2.569	.917	.751
.636	.994	.417	2.629	.925	.768
.676	.995	.406	2.692	.933	.786
.715	.996	.396	2.752	.941	.805
.757	.996	.386	2.810	.948	.825
.798	.997	.377	2.870	.956	.846
.840	.998	.367	2.933	.963	.866
.881	.998	.358	2.992	.971	.890
.922	.999	.349	3.052	.978	.913
.959	.999	.340	3.111	.984	.936
1.002	1.000	.332	3.171	.990	.958
1.040	1.001	.326	3.220	.995	.976
1.082	1.001	.319	3.270	.999	.991
1.121	1.001	.315	3.302	1.000	.996
1.163	1.002	.313	3.317		

OEL = 1.0845	DELU= .1591	DEL*= .4243 CM
THETA= .07253	H = 5.995	UE = 660.7 M/SEC
RHOE= .1835 KG/M**3		RUN = 409

Y/OEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.341
.016	.962	.770	1.115	.528	.406
.022	.965	.744	1.218	.567	.420
.036	.970	.706	1.365	.619	.442
.053	.973	.680	1.467	.653	.460
.083	.976	.642	1.615	.698	.487
.116	.979	.611	1.737	.732	.512
.148	.981	.587	1.832	.758	.532
.181	.983	.566	1.918	.779	.552
.215	.984	.546	2.003	.799	.572
.250	.986	.529	2.079	.816	.591
.286	.987	.514	2.146	.830	.609
.323	.988	.500	2.212	.844	.626
.361	.989	.486	2.273	.856	.643
.397	.990	.476	2.326	.866	.657
.434	.991	.465	2.376	.875	.672
.474	.992	.455	2.429	.884	.687
.514	.992	.445	2.481	.893	.703
.554	.993	.435	2.532	.901	.719
.594	.994	.426	2.582	.909	.734
.633	.994	.417	2.633	.917	.751
.671	.995	.407	2.686	.925	.768
.713	.996	.398	2.740	.933	.786
.753	.996	.388	2.798	.941	.805
.793	.997	.379	2.854	.948	.825
.836	.997	.370	2.914	.956	.846
.874	.998	.361	2.970	.963	.866
.916	.999	.352	3.034	.971	.890
.957	1.000	.343	3.096	.978	.913
.996	1.000	.334	3.156	.984	.936
1.036	1.000	.327	3.212	.990	.958
1.075	1.001	.320	3.259	.995	.976
1.118	1.001	.316	3.295	.999	.991
1.158	1.001	.314	3.308	1.000	.996

OEL = 1.0895	DELU= .1528	DEL*= .4243 CM
THETA= .07138	H = 5.944	UE = 660.7 M/SEC
RHOE= .1824 KG/M**3		RUN = 409

MACH = 3.00	P0 = 298.0 KPA	T0 = 309.8 K	MACH = 3.00	P0 = 297.6 KPA	T0 = 310.0 K
ALPHA = 6.34	Z/D = 5.67	PHI = 210.	ALPHA = 6.34	Z/D = 5.67	PHI = 210.
RPM = 0.	PW = 4.89 KPA	REL = 7194640.	RPM = 20000.	PW = 4.89 KPA	REL = 7188599.

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.339
.010	.947	.960	.707	.511	.399
.015	.952	.961	.835	.527	.404
.025	.958	.964	.997	.562	.416
.046	.962	.967	1.141	.593	.429
.088	.968	.969	1.301	.616	.439
.129	.971	.972	1.424	.649	.456
.173	.974	.974	1.529	.672	.469
.217	.976	.975	1.614	.690	.480
.260	.978	.977	1.696	.705	.490
.311	.980	.978	1.784	.721	.502
.356	.982	.979	1.870	.737	.514
.408	.983	.981	1.963	.754	.528
.459	.985	.982	2.054	.772	.544
.508	.986	.984	2.147	.791	.563
.560	.988	.985	2.250	.812	.586
.611	.990	.987	2.367	.832	.610
.666	.992	.989	2.495	.854	.640
.717	.993	.990	2.614	.876	.673
.771	.995	.992	2.743	.898	.712
.827	.996	.994	2.877	.921	.758
.881	.997	.995	3.004	.938	.799
.937	.999	.997	3.085	.954	.842
1.018	.999	.998	3.204	.962	.863
1.074	1.000	.998	3.259	.974	.903
1.159	1.000	.999	3.305	.985	.941
1.244	1.000	1.000	3.322	.995	.978
				.999	.993

DEL = .7961	DELU = .1570	DEL* = .3752 CM
THETA = .05958	H = 6.296	UE = 654.7 M/SEC
RHDE = .1782	KG/M**3	RUN = 369

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.339
.010	.947	.960	.707	.511	.399
.015	.952	.961	.835	.527	.404
.025	.958	.964	.997	.562	.416
.046	.962	.967	1.141	.593	.429
.088	.968	.969	1.301	.616	.439
.129	.971	.972	1.424	.649	.456
.173	.974	.974	1.529	.672	.469
.217	.976	.975	1.614	.690	.480
.260	.978	.977	1.696	.705	.490
.311	.980	.978	1.784	.721	.502
.356	.982	.979	1.870	.737	.514
.408	.983	.981	1.963	.754	.528
.459	.985	.982	2.054	.772	.544
.508	.986	.984	2.147	.791	.563
.560	.988	.985	2.250	.812	.586
.611	.990	.987	2.367	.832	.610
.666	.992	.989	2.495	.854	.640
.717	.993	.990	2.614	.876	.673
.771	.995	.992	2.743	.898	.712
.827	.996	.994	2.877	.921	.758
.881	.997	.995	3.004	.938	.799
.937	.999	.997	3.085	.954	.842
1.018	.999	.998	3.204	.962	.863
1.074	1.000	.998	3.259	.974	.903
1.159	1.000	.999	3.305	.985	.941
1.244	1.000	1.000	3.322	.995	.978
				.999	.993

DEL = .7961	DELU = .1570	DEL* = .3752 CM
THETA = .05958	H = 6.296	UE = 654.7 M/SEC
RHDE = .1782	KG/M**3	RUN = 369

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.339
.010	.947	.960	.707	.511	.399
.015	.952	.961	.835	.527	.404
.025	.958	.964	.997	.562	.416
.046	.962	.967	1.141	.593	.429
.088	.968	.969	1.301	.616	.439
.129	.971	.972	1.424	.649	.456
.173	.974	.974	1.529	.672	.469
.217	.976	.975	1.614	.690	.480
.260	.978	.977	1.696	.705	.490
.311	.980	.978	1.784	.721	.502
.356	.982	.979	1.870	.737	.514
.408	.983	.981	1.963	.754	.528
.459	.985	.982	2.054	.772	.544
.508	.986	.984	2.147	.791	.563
.560	.988	.985	2.250	.812	.586
.611	.990	.987	2.367	.832	.610
.666	.992	.989	2.495	.854	.640
.717	.993	.990	2.614	.876	.673
.771	.995	.992	2.743	.898	.712
.827	.996	.994	2.877	.921	.758
.881	.997	.995	3.004	.938	.799
.937	.999	.997	3.085	.954	.842
1.018	.999	.998	3.204	.962	.863
1.074	1.000	.998	3.259	.974	.903
1.159	1.000	.999	3.305	.985	.941
1.244	1.000	1.000	3.322	.995	.978
				.999	.993

DEL = .7961	DELU = .1570	DEL* = .3752 CM
THETA = .05958	H = 6.296	UE = 654.7 M/SEC
RHDE = .1782	KG/M**3	RUN = 369

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.339
.010	.947	.960	.707	.511	.399
.015	.952	.961	.835	.527	.404
.025	.958	.964	.997	.562	.416
.046	.962	.967	1.141	.593	.429
.088	.968	.969	1.301	.616	.439
.129	.971	.972	1.424	.649	.456
.173	.974	.974	1.529	.672	.469
.217	.976	.975	1.614	.690	.480
.260	.978	.977	1.696	.705	.490
.311	.980	.978	1.784	.721	.502
.356	.982	.979	1.870	.737	.514
.408	.983	.981	1.963	.754	.528
.459	.985	.982	2.054	.772	.544
.508	.986	.984	2.147	.791	.563
.560	.988	.985	2.250	.812	.586
.611	.990	.987	2.367	.832	.610
.666	.992	.989	2.495	.854	.640
.717	.993	.990	2.614	.876	.673
.771	.995	.992	2.743	.898	.712
.827	.996	.994	2.877	.921	.758
.881	.997	.995	3.004	.938	.799
.937	.999	.997	3.085	.954	.842
1.018	.999	.998	3.204	.962	.863
1.074	1.000	.998	3.259	.974	.903
1.159	1.000	.999	3.305	.985	.941
1.244	1.000	1.000	3.322	.995	.978
				.999	.993

DEL = .7961	DELU = .1570	DEL* = .3752 CM
THETA = .05958	H = 6.296	UE = 654.7 M/SEC
RHDE = .1782	KG/M**3	RUN = 369

Y/DEL	TT/T0	T/T0	M	U/UE	RHD/RHDE
.000	.917	.917	.000	.000	.339
.010	.947	.960	.707	.511	.399
.015	.952	.961	.835	.527	.404
.025	.958	.964	.997	.562	.416
.046	.962	.967	1.141	.593	.429
.088	.968	.969	1.301	.616	.439
.129	.971	.972	1.424	.649	.456
.173	.974	.974	1.529	.672	.469
.217	.976	.975	1.614	.690	.480
.260	.978	.977	1.696	.705	.490
.311	.980	.978	1.784	.721	.502
.356	.982	.979	1.870	.737	.514
.408	.983	.981	1.963	.754	.528
.459	.985	.982	2.054	.772	.544
.508	.986	.984	2.147	.791	.563
.560	.988	.985	2.250	.812	.586
.611	.990	.987	2.367	.832	.610
.666	.992	.989	2.495	.854	.640
.717	.993	.990	2.614	.876	.673
.771	.995	.992	2.743	.898	.712
.827	.996	.994	2.877	.921	.758
.881	.997	.995	3.004	.938	.799
.937	.999	.997	3.085	.954	.842
1.018	.999	.998	3.204	.962	.863
1.074	1.000	.998	3.259	.974	.903
1.159	1.000	.999	3.305	.985	.941
1.244	1.000	1.000	3.322	.995	.978
				.999	.993

DEL = .7961	DELU = .1570	DEL* = .3752 CM
THETA = .05958	H = 6.296	UE = 654.7 M/SEC
RHDE = .1782	KG/M**3	RUN = 369



MACH = 3.00	P0 = 297.9 KPA	T0 = 311.4 K	MACH = 3.00	P0 = 297.9 KPA	T0 = 311.6 K
ALPHA= 6.34	Z/D= 5.67	PHI= 240.	ALPHA= 6.34	Z/D= 5.67	PHI= 240.
RPM= 0.	PW = 4.28 KPA	REL=7151050.	RPM= 20000.	PW = 4.29 KPA	REL=7146557.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.327
.016	.949	.852	.754	.374	.388
.040	.957	.799	.996	.478	.402
.072	.963	.752	1.185	.552	.414
.112	.968	.719	1.316	.600	.427
.140	.970	.695	1.407	.630	.441
.177	.973	.664	1.526	.668	.458
.218	.976	.629	1.662	.708	.476
.255	.980	.595	1.799	.746	.488
.313	.983	.553	1.972	.788	.505
.368	.986	.518	2.125	.822	.536
.426	.988	.488	2.263	.850	.570
.484	.990	.463	2.384	.872	.601
.545	.992	.442	2.494	.891	.636
.602	.993	.422	2.601	.908	.669
.671	.994	.402	2.714	.925	.703
.733	.995	.384	2.820	.939	.738
.796	.997	.368	2.923	.953	.774
.863	.998	.352	3.026	.965	.813
.929	.999	.339	3.116	.975	.850
.989	.999	.329	3.193	.984	.889
1.060	1.000	.319	3.267	.991	.926
1.130	1.000	.313	3.315	.996	.960
1.218	1.000	.309	3.348	.999	.989
1.313	1.001	.307	3.360	1.000	.999

DEL = .4671	DELU= .0836	DEL*= .2018 CM	DEL = .5068	DELU= .0973	DEL*= .2325 CM
THETA= .03149	H = 6.410	UE = 658.3 M/SEC	THETA= .03479	H = 6.684	UE = 662.4 M/SEC
RHOE= .1572 KG/M**3		RUN = 375	RHOE= .1614 KG/M**3		RUN = 376



MACH = 3.00	P0 = 297.7 KPA	T0 = 319.8 K	MACH = 3.00	P0 = 297.8 KPA	T0 = 319.8 K
ALPHA= 6.34	Z/D= 5.67	PHI= 300.	ALPHA= 6.34	Z/D= 5.67	PHI= 300.
RPM= 0.	PW = 4.01 KPA	REL=6868018.	RPM= 20000.	PW = 4.01 KPA	REL=6867857.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.914	.914	.000	.000	.251
.026	.958	.779	1.072	.500	.818
.036	.962	.744	1.210	.552	.819
.066	.971	.661	1.530	.658	.825
.095	.976	.615	1.714	.711	.834
.124	.980	.572	1.889	.755	.844
.192	.984	.518	2.120	.807	.859
.246	.986	.486	2.269	.837	.879
.309	.988	.461	2.389	.859	.884
.365	.990	.442	2.490	.875	.908
.425	.991	.421	2.604	.893	.939
.487	.993	.402	2.711	.909	.971
.552	.994	.385	2.809	.922	.859
.613	.995	.371	2.901	.934	.879
.670	.995	.359	2.979	.944	.908
.737	.996	.347	3.058	.953	.939
.803	.997	.335	3.140	.962	.971
.867	.998	.325	3.215	.970	.859
.929	.998	.315	3.289	.977	.879
.995	.999	.306	3.366	.985	.908
1.066	.999	.298	3.431	.991	.939
1.138	.999	.292	3.481	.995	.971
1.208	1.000	.288	3.513	.998	.908
1.270	1.000	.286	3.530	.999	.939

DEL = .2929	DELU= .0382	DEL*= .1099 CM
THETA= .01661	H = 6.619	UE = 677.6 M/SEC
RHOE= .1542	KG/M**3	RUN = 430

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.907	.907	.000	.000	.251
.488	.997	.279	3.589	.965	.818
.564	.997	.279	3.590	.965	.819
.637	.997	.276	3.610	.966	.825
.710	.997	.274	3.636	.968	.834
.783	.998	.270	3.668	.971	.844
.854	.998	.266	3.713	.974	.859
.924	.998	.259	3.773	.978	.879
.989	.999	.251	3.855	.984	.908
1.053	.999	.243	3.946	.990	.939
1.113	1.000	.235	4.035	.995	.971

DEL =	DELU=	DEL*=
THETA=	H =	UE =
RHOE=	KG/M**3	RUN = 431

NOTE: Partial boundary layer profile.  
Integral parameters not computed.

MACH = 3.00	P0 = 298.3 KPA	T0 = 317.8 K	MACH = 3.00	P0 = 297.8 KPA	T0 = 318.4 K
ALPHA= 6.34	Z/D= 5.67	PHI= 330.	ALPHA= 6.34	Z/D= 5.67	PHI= 330.
RPM= 0.	PW = 4.91 KPA	REL=6932989.	RPM= 20000.	PW = 4.91 KPA	REL=6917394.

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.338
.031	.960	.977	1.088	.516	.400
.048	.966	.735	1.252	.578	.423
.064	.970	.696	1.401	.630	.446
.082	.974	.659	1.547	.676	.472
.109	.978	.620	1.700	.721	.501
.135	.980	.587	1.829	.755	.529
.173	.983	.551	1.978	.791	.563
.199	.985	.532	2.064	.811	.584
.278	.988	.494	2.235	.846	.629
.343	.989	.472	2.339	.866	.658
.409	.991	.454	2.429	.882	.684
.478	.992	.434	2.533	.899	.715
.548	.993	.415	2.638	.916	.748
.621	.994	.399	2.734	.930	.780
.695	.996	.384	2.822	.942	.809
.769	.996	.369	2.913	.954	.841
.838	.997	.357	2.995	.964	.871
.914	.998	.344	3.085	.974	.904
.989	.999	.331	3.175	.984	.938
1.069	.999	.324	3.227	.990	.959
1.141	1.000	.319	3.269	.994	.975
1.224	1.000	.315	3.300	.997	.988
1.305	1.000	.312	3.318	.999	.995
1.382	1.000	.311	3.326	1.000	.998
1.457	1.000	.311	3.330	1.000	1.000
1.626	1.000	.311	3.331	1.000	1.000

DEL = .2470	DELU= .0337	DEL*= .0908 CM
THETA= .01498	H = 6.061	UE = 663.3 M/SEC
RHOE= .1741 KG/M**3		RUN = 396

Y/DEL	TT/T0	T/T0	M	U/UE	RHO/RHOE
.000	.917	.917	.000	.000	.338
.083	.976	.636	1.633	.702	.488
.106	.978	.611	1.735	.730	.508
.139	.981	.576	1.876	.767	.539
.171	.984	.548	1.993	.795	.566
.205	.985	.526	2.088	.816	.590
.236	.987	.507	2.177	.835	.613
.266	.988	.493	2.240	.847	.630
.341	.990	.469	2.357	.869	.662
.405	.991	.450	2.453	.886	.690
.475	.992	.431	2.552	.902	.721
.544	.993	.413	2.652	.918	.752
.610	.995	.397	2.741	.931	.781
.687	.996	.382	2.831	.943	.812
.754	.996	.369	2.913	.954	.840
.829	.997	.355	3.008	.965	.875
.906	.998	.343	3.094	.975	.907
.980	.999	.332	3.166	.983	.934
1.057	.999	.324	3.231	.990	.959
1.131	1.000	.318	3.274	.994	.976
1.208	1.000	.314	3.305	.997	.989
1.290	1.000	.312	3.322	.999	.996
1.369	1.000	.311	3.329	1.000	.999
1.448	1.000	.311	3.332	1.000	1.000

DEL = .2497	DELU= .0346	DEL*= .0902 CM
THETA= .01439	H = 6.266	UE = 664.0 M/SEC
RHOE= .1738 KG/M**3		RUN = 397

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